# Forest Tenures in Canada: A Framework for Policy Analysis

David Haley and Martin K. Luckert

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# Forest Tenures in Canada:
# A Framework For Policy Analysis

by

David Haley and Martin K. Luckert*

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## Abstract

This report describes an analytical framework within which public forest tenures can be compared and which will help forest policy makers to develop new tenure arrangements designed to effectively achieve public objectives.

Tenure dimensions, or characteristics, which are postulated to have an impact on the behaviour of forest tenure holders, are identified and described. These include: comprehensiveness; duration, or term; transferability; right of holder to economic benefits; exclusiveness; security; use restrictions; allotment type; size specification; operational stipulations and operational controls. These characteristics are used as a framework to describe, classify and compare 34 individual provincial Crown forest tenures.

A major problem governments face when designing forest tenure systems is to estimate and compare the benefits and costs, in terms of social objectives, of limiting the property rights of the private sector to varying degrees. Additional problems encountered by public policy makers in specifying forest tenure systems are interdependencies among tenure characteristics and among tenure types.

The postulated relationships between forest tenure characteristics and private sector behaviour are not well supported by empirical evidence and more research in this area is warranted since it is important to the efficient management of public forest resources.



## Résumé

Le présent rapport décrit un cadre de travail analytique qui pourra servir à la comparaison des tenures forestières de terres publiques et qui aidera les décideurs en matière de politique forestière à élaborer de nouvelles formules de tenures en vue d'atteindre efficacement des objectifs sociaux.

Les composantes ou caractéristiques des tenures susceptibles d'avoir un impact sur l'attitude du détenteur d'un titre sont énumérées et décrites. Elles incluent : le champ d'application et la durée de la tenure; la transférabilité des titres; le droit du détenteur du titre à des avantages économiques; l'exclusivité des droits; la sécurité morale; les restrictions quant à l'utilisation des sites forestiers; le type d'affectation de la ressource; les spécifications quant à la taille du site forestier et (ou) de l'entreprise; les exigences touchant l'exploitation; et les contrôles opérationnels. Ces caractéristiques sont utilisées à titre de cadre de travail dans la description, la classification et la comparaison de 34 différentes tenures de terres forestières de la Couronne provinciale.

L'estimation et la comparaison des avantages et des coûts qu'entraînent, sur le plan des objectifs sociaux, les diverses limitations des droits de propriété du secteur privé constituent l'un des principaux problèmes auxquels les gouvernements doivent faire face lorsqu'ils conçoivent leur régime de tenures forestières. Les problèmes supplémentaires que doivent affronter les décideurs lors de l'élaboration des régimes de tenures forestières incluent l'interdépendance des caractéristiques des tenures et des types de tenures.

Les liens qui semblent exister entre les caractéristiques des tenures forestières et l'attitude du secteur privé ne sont pas bien étayés par des preuves concrètes, et des recherches supplémentaires seraient justifiées dans ce domaine, étant donné l'importance de ces liens dans l'aménagement efficace des ressources forestières publiques.

# Part One

## Introduction

### Background and Purpose of Study

In most countries with forest resources, there is a considerable amount of public involvement in their management. Justification for such widespread public intervention is the failure, or perceived failure, of private market processes to allocate forest resources in an optimum manner from a social perspective. Market failure results when prices, which influence the production and consumption decisions of firms in the private sector, fail to reflect the benefits and costs of forest resource use to society.

The Economic Council of Canada (1984) identified several sources of market failure in the forestry sector. The most common source arises because many of the services provided by forest resources are not exchanged through conventional market channels. They are unpriced in the market place and, therefore, private land managers have no incentive to produce them at an optimal rate. Such services include various types of outdoor recreation, wildlife habitat, flood and avalanche control, water quality, soil stabilization, aesthetic values and climate modification.

A second source of market failure is that forest-based industries are frequently associated with the growth and development of rural regions and form the principal economic support for numerous small communities. Profit-motivated private firms are said to give insufficient weight in their production decisions to the importance of community survival and the stability of regional employment and incomes.

Finally, there is a common perception that due to capital market imperfections and the relatively short time horizons of private (compared to public) planners, private forest firms invest in silviculture at a rate which is below the social optimum.

Governments may react to market failure in several ways. They may ignore the failure of markets to serve the public interest, and frequently do, on the grounds that the costs of bureaucratic intervention, both directly and in terms of reduced economic efficiency and loss of personal freedom, exceed the potential social benefits. However, sometimes, the divergence between public and private interests is so great that public policies designed to replace, or modify, market allocative processes are considered to be in the best public interest.

Governments may choose several ways in which to intervene in the market allocative process. These include direct control over resource allocation through public resource ownership or regulation of the private sector to varying degrees.

Property rights are major policy instruments used by governments to regulate the private sector. Indeed, the differences between the broad policy options presented above are, in fact, simply variations in the specification of property rights. In the case of public ownership, property rights are vested in the state. When governments regulate the private sector, they do so by either limiting, or attenuating, certain privileges of property ownership or by transferring certain property rights to the private sector while retaining public control over residual rights.

Perhaps the most common way of limiting private property rights is through taxes, which reduce the benefits a property holder may receive[1]. However, in the case of forest resources, many governments, fearing the market failures discussed above, have retained title to a substantial proportion of the forest land within their jurisdictions and have transferred only partial rights to the private sector.

[1] A study of taxation and the forestry sector in Canada has been carried out by the Canadian Forestry Service (Boulter, 1984).

Governments in Canada, both provincial and federal, have retained title to a remarkably high proportion of forest land. Only 6.3 percent of Canada's 397.92 million hectares of inventoried forest land is in private ownership, 23.8 percent is owned federally and 69.9 percent by the provinces (Forestry Canada, 1989). Only in New Brunswick, Nova Scotia and Prince Edward Island does private ownership comprise a substantial proportion of provincial forest land (Table 1).

**Table 1.** Total Inventoried Forest Land in Canada by Province and Ownership

| Provinces and Territories | Area in '000 000 ha | | | | |
|---|---|---|---|---|---|
| | Provincial | Federal | Private | Municipal/ Unclass. | Total |
| British Columbia | 57.70 | 0.57 | 2.04 | - | 60.31 |
| Alberta | 32.99 | 3.53 | 1.12 | 0.11 | 37.75 |
| Saskatchewan | 22.78 | 0.50 | 0.43 | - | 23.71 |
| Manitoba | 23.45 | 0.39 | 1.17 | 0.12 | 25.12 |
| Ontario | 39.72 | 0.32 | 6.52 | 0.05 | 46.60 |
| Quebec | 75.33 | 0.23 | 6.93 | - | 82.49 |
| New Brunswick | 3.09 | 0.16 | 3.09 | - | 6.34 |
| Nova Scotia | 1.09 | 0.11 | 2.83 | - | 4.04 |
| Prince Edward Island | 0.02 | - | 0.27 | - | 0.30 |
| Newfoundland | 21.79 | 0.10 | 0.59 | - | 22.48 |
| Yukon Territory | - | 27.37 | - | - | 27.37 |
| Northwest Territory | - | 61.44 | - | - | 61.44 |
| **Canada** | **277.92** | **94.72** | **24.98** | **0.28** | **397.92** |

Source : Forestry Canada, 1989; 1986 data.

Although the majority of forest land in most regions of Canada is publicly owned, facilities for harvesting and processing timber are mainly in private ownership. Furthermore, as Pearse (1987) observed, "the preference of Canadians for public ownership (of forest lands) is not matched by an enthusiasm for big bureaucracies to manage them." As a result of this dichotomy of ownership and conflicting social preferences, one of the foremost forest policy questions facing governments throughout Canada, since the earliest days of land settlement, has been the transfer of timber harvesting rights and forest management responsibilities from the public to the private sector while ensuring that public resource management and development objectives are achieved. The various agreements which have been devised to accomplish this task have become known as **forest tenures**. To a great extent, the history of public forest policy development in all the provinces is a story of the evolution of forest tenure arrangements in response to changing economic conditions and social objectives.

Tenure arrangements, through the imposition of regulations and the creation of incentives, profoundly influence the ways in which economic institutions function and firms and individuals behave. A well-designed tenure system can provide a management environment in which decisions taken by the private sector will further social objectives, whereas a poorly designed system may result in private behaviour which frustrates public goals.

The evolution of forest property rights in Canada has differed markedly from province to province and there exists today a complex array of tenure arrangements throughout the country. In many respects, there are similarities among the forest tenure systems which have developed within individual provinces. But in some cases, provinces have evolved unique tenure arrangements to deal with specific resource management problems. In recent years, several provinces have restructured

their public forest tenure systems to eliminate the more serious anomalies and inconsistencies, which have resulted from decades of piecemeal development, and have put in place new arrangements which are thought to meet, more effectively, a broad range of emerging social concerns for improved management, renewal, and conservation of the resource.

Although the provinces face many common forest management problems and could learn much from each others' experiences with different policy and administrative arrangements for the management of Crown lands, a detailed comparison of forest tenures across the country has never been undertaken. The purpose of this study is to provide a framework for policy analysis within which such comparisons can be made[2].

### Organization of Report

**Part Two** of this report addresses the concept of forest tenures as property rights and their role in a market economy. Then the various dimensions, or characteristics, of forest tenures are described. A comparison of the varied public forest tenure arrangements in the ten Canadian provinces is provided in **Part Three**. This discussion is supported by data which are presented in an extensive Appendix. **Part Four** addresses the problems faced by provincial governments in designing forest tenure systems to effectively meet public resource management goals. The interactions among tenure characteristics are discussed and some of the trade-offs governments must consider in pursuing multiple resource management objectives are described. In **Part Five**, the contents of the report are summarized and areas for further research are suggested.

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[2] This study deals with Crown provincial tenures only. Federal forest lands, including those in the Yukon and Northwest Territories, are not included.

# Part Two

## Property Rights: Concepts and Characteristics

### The Concept of Property Rights

Fischer (1923) defined property rights as "the liberty or permit to enjoy the benefits of wealth while assuming the costs which these benefits entail." This definition emphasizes the most important function of property rights; they determine who gains from, and who bears the costs of, economic transactions and to what extent. Dales (1968) described property rights as the interface between law and economics. The way in which an economy functions is, to a large extent, dependent on the nature of property rights which are created, defined, circumscribed, and granted through legal processes.

A system of individual property rights is necessary to the efficient operation of an economy, such as the Canadian economy, which relies heavily on market processes. A market economy is concerned with buying, selling, leasing and withholding property rights. Market transactions consist of transferring property rights, in the broadest sense, from one party to another. As Furubotn and Pejovich (1972) have stated, "the value of any goods exchanged depends, *ceteris paribus*, on the bundle of property rights which is conveyed in the transaction." Thus, the value of an asset depends on two major factors, its physical characteristics and the privileges, social regulations and responsibilities which accompany its ownership.

Dahlman (1980) said that property rights are "the rights of decision making with regards to an asset that is recognized within any given social setting." The costs and benefits associated with the ownership of an asset depend upon the degree to which property rights are limited, or attenuated. For example, benefits accrue to holders of forest tenures from the rights they enjoy. Rights allow tenure holders to capture benefits in excess of the costs they must bear in meeting their contractual obligations under the terms of their tenure agreements. A tenure holder can be said to have a right to harvest timber if the costs of meeting such requirements as utilization standards, yield control regulations, and environmental protection standards, are less than the value of the timber harvested, net of stumpage, royalties and other charges. If the costs of meeting contractual requirements exceed the benefits from harvesting timber, the tenure holder will not have an incentive to harvest. In such cases, the tenure holder has no harvesting rights - they have, in effect, been appropriated or retained by the government on behalf of society. Likewise, a forest tenure holder only has a right to grow timber on public land if the returns he anticipates from establishing and nurturing a forest crop exceed the total cost of his investment plus stumpage and the cost of meeting the many other requirements frequently associated with the management of public forest land. In the absence of such rights, tenure holders will only reforest and undertake other silvicultural operations if they are required to do so under the terms of their agreements (Luckert and Haley, 1989a).

### Characteristics of Forest Tenures

In order to describe and compare forest tenures as a basis for policy analysis, it is useful to disaggregate them into a number of components which can be described as tenure **dimensions or characteristics**.

Scott and Johnson (1983), among others, have identified some general characteristics of property rights which may be used to describe forest tenures[3]. These include:

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[3] There are many ways to classify property rights. The following classification has been adopted because it is thought that these categories best describe attributes of property rights as they apply to forest tenures. Furthermore, in classifying property rights, there is the question of which restrictions placed on tenure holders may be considered specific to forest tenures and which restrictions are part of the more general legal framework within which any property rights are granted. This study considers those restrictions which affect forest tenure holders' decisions, but not the more general legal restrictions which affect all property holders.

comprehensiveness;
duration;
transferability;
right of tenure holder to economic benefits;
exclusiveness;
and security.

Additional characteristics which are useful in describing and comparing forest tenures are:

use restrictions;
allotment types;
size specifications;
operational stipulations;
and operational controls.

**Comprehensiveness** refers to the number of attributes of an asset over which a property rights' holder has control. The acquisition of an asset does not always include the rights to all its attributes. Some may be disposed of separately. For example, when rights to land are either sold or granted, rights to water and minerals are often separated from surface rights. Governments, transferring certain rights to forest land, frequently withhold the rights to non-timber products. Forest tenure agreements in Canada invariably grant rights to harvest timber but never grant rights to recreation and wildlife resources.

**Duration** refers to the period over which property rights can be exercised. Private ownership usually implies a period of perpetual duration, but various forms of leases and licences may specify terms of varying length. An important related aspect of duration is tenure renewability. Forest tenures may be replaced or renewed to extend their duration.

**Transferability** refers to the rights of property holders to sell, or otherwise dispose of, their property as they see fit. Transferability varies greatly and shows no consistent pattern among different types of property holdings. Thus, otherwise unfettered private property may be subject to restrictive covenants which limit the tenure holder's ability to sell, lease, give or bequeath the rights to whom he wishes. On the other hand, certain highly restricted leases and licences may be fully and freely transferable.

In addition to controlling transferals of property rights themselves, transferability restrictions may be extended to products arising from the use of an asset. For example, in Canada there are both provincial and federal controls on the export of logs and other unmanufactured forest products. Some provincial restrictions even prohibit interprovincial log sales. In some cases, holders of Crown tenures are directed to sell logs or chips to certain manufacturing firms.

The right of a tenure holder to economic benefits refers to the extent to which the economic returns generated by an asset can be captured by the holder of the property rights. The rights of property holders, in this respect, may be limited by the imposition of taxes, fees and user charges, and by restrictions which require the property to be managed or maintained in certain ways. For instance, timber recovery standards, yield control requirements, and environmental guidelines all burden forest tenure holders with additional operating costs which reduce their rights to economic benefits.

**Exclusiveness** refers to the rights of property holders to prevent others from freely enjoying the benefits of the asset. Without some degree of exclusivity, property rights may be of very little value to their holders. Assets to which exclusive rights cannot be granted are known as "public goods[4]." Such goods will not be produced at an optimum level through private sector activities and, if socially desirable, must be provided through collective action. Classic examples of public goods include such things as lighthouses and national defense. They may also include many important forest products such as wilderness, landscape, and watershed protection.

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[4] Public goods also have the property that an additional user does not reduce the value of the goods to others.

An additional characteristic of property rights, which will be referred to as security, is of a somewhat different nature to those described above. It has no statutory or common law basis, but depends on the socio- political environment in which a particular set of property rights is granted. To a great extent, security is a function of the property right holders' perceptions: the extent to which they "trust" the political system under which their property rights were granted; their past experiences; and the probabilities they attach to the chances of political or social changes of various types. Security, as we shall see later, is one of the important factors affecting the behaviour of forest tenure holders, yet it is the most difficult to quantify objectively.

**Use restrictions** limit the ways in which an asset may be used. Common examples are zoning restrictions which prevent businesses from locating in residential areas, or the creation of exclusive agricultural or forest reserves.

**Allotment type**, with respect to forest tenures, refers to whether rights are granted within a specific geographical location (area-based) or to a certain volume of timber to be cut annually or periodically from within a broadly defined region (volume-based).

**Size specification** refers to restrictions on the area or volume which may granted under a particular tenure arrangement. Furthermore, in some cases, tenures may be reserved for small forestry companies or private individuals.

**Operational stipulations** fall into three main categories: management, harvesting and processing. Management stipulations exist to ensure that the timber resource is conserved and perpetuated and include reforestation and protection requirements. Harvesting stipulations are frequently used to ensure "full" utilization of the resource and enforce sustained yield. Processing stipulations commonly require the tenure holder to build, or maintain in operation, a timber processing facility of a certain capacity and/or type.

**Operational control** refers to the means and extent to which governments ensure compliance with operational stipulations and other restrictions placed on tenure holders. Operational control often involves monitoring performance and enforcing standards. However, control may also be exercised by requiring that operational, working, and management plans be submitted to the government for approval.

# Part Three

## Descriptions and Comparisons of Crown Forest Tenures

Tenure characteristics described in **Part Two** may be used as a taxonomical framework to describe entire tenures. The Appendix to this report uses this taxonomy to describe the many different types of tenures which exist in provinces across Canada. These detailed descriptions contain an enormous amount of information. Therefore, this section will provide an overview of provincial forest tenure systems and briefly compare tenure types.

Tables 2 and 3 have been prepared to help summarize provincial tenure systems. Table 2 shows the distribution of allowable annual cuts by type of tenure for each province. Table 3 classifies provincial forest tenures by their principal characteristics. To simplify the table, some minor tenure types have been omitted and certain characteristics appearing in the Appendix have been disregarded because they were considered to be of limited importance for comparative purposes.

### Data Sources

Several sources were used to compile the Appendix. First, provincial statutes relating to forestry were reviewed. These provide the legislative authority under which property rights to provincial forest land are granted and describe, in a general way, the conditions under which each tenure type is held. Second, forest regulations were consulted. These describe in more detail the rights and obligations of tenure holders, particularly requirements concerning silviculture, the preservation of environmental quality, protection, harvesting and timber processing. Regulations can be changed by Order-in- Council (i.e. by provincial cabinets) and are, therefore, more flexible than the Acts themselves which can only be amended through the full legislative process. Third, in a few instances, specific tenure agreements were consulted.

Whereas these legal sources provided all the necessary **de jure** information for describing forest tenures, it was also important, given the purposes of this study, to consider the **de facto** conditions under which forest tenures are administered. Some of this additional information was obtained from a study conducted by Sterling-Wood Group Inc. (1985) for the Canadian Forestry Service (now Forestry Canada). In addition, various reports by provincial task forces and commissions dealing with forest policy were reviewed plus the published and unpublished works of a number of authors (see Appendix and References Cited for details).

When the documents appearing in the Appendix were available in draft form, they were sent to public forest administrators in each province for corroboration and amendment where necessary.

### Overview of Provincial Forest Tenures

There are 24 principal provincial forest tenures in Canada plus a number of miscellaneous licences and permits. In all provinces, however, cutting rights to most of the committed allowable annual cut are transferred to the private sector under one or two major types of tenure agreement (Table 2). Where two major tenure arrangements exist, one generally takes the form of a longer-term, area-based agreement which delegates considerable management responsibilities to tenure holders, whereas the second type is usually of shorter duration, volume-based, and delegates fewer management responsibilities to tenure holders. Tenures of the first type are frequently held by large integrated or pulp- producing companies while those of the second type are often held by smaller, non-integrated logging and/or sawmilling enterprises.

In addition to their principal forest tenures, most provinces have one or more minor tenures which are used to allocate small parcels of timber and/or forest land for personal or farm use and for such enterprises as Christmas tree, maple syrup or fuel wood production. Examples of such tenures include Timber Permits in Alberta and Manitoba; Miscellaneous Permits and Licences in British Columbia and Quebec; and Letters of Authority in Nova Scotia.

**Table 2. Distribution of Provincial Allowable Annual Cuts by Tenure**

| Province/Tenure | Number of Tenures | Committed AAC ('000 $m^3$) | % of Provincial Committed AAC |
|---|---|---|---|
| **British Columbia**[a] | | 70 270 | |
| Tree Farm Licence | 31 | 18 327 | 26 |
| Forest Licence | 171 | 39 499 | 56 |
| Major Timber Sale Licence | 190 | 802 | 1 |
| Minor Timber Sale Licence | 1 916 | 4 961 | 7[b] |
| Timber Licence | 817 | not appl. | not appl. |
| Pulpwood Agreement | 7 | not appl. | not appl. |
| Woodlot Licence | 450 | 452 | 0.6 |
| Miscellaneous Permits | variable | not appl. | not appl. |
| Timber Sale Harvesting Licence[c] | 3 | 1 812 | 3 |
| Forest Service Reserve[d] | not appl. | 4 417 | 6 |
| **Alberta**[a] | | 24 666 | |
| Forest Management Agreement | 7 | 6 868 | 28 |
| Timber Quota | 157 | 6 490 | 26 |
| Timber Permits | variable | 1 628 | 7 |
| Designated for future development pending final approval | unknown | 9 190 | 37 |
| Uncommitted | unknown | 490 | 2 |
| **Saskatchewan**[f] | | 6 105 | |
| Forest Management Licence Agreement | 5 | 5 683 | 93 |
| Term Cutting Agreement | 0 | 0 | 0 |
| Timber Permit | 1 450 | 422 | 7 |
| **Manitoba**[g] | | 2 336 | |
| Forest Management Licence | 2 | 1 393 | 60 |
| Timber Sale Agreement | 408 | 750 | 32 |
| Timber Permit | 5 998 | 193 | 8 |
| **Ontario**[h] | | 260 000 $km^2$ | |
| Forest Management Agreement | 30 | 182 000 $km^2$ | 70 |
| Order-in-Council Licence | 234 | 67 600 $km^2$ | 26 |
| Miscellaneous Licences | variable | 10 400 $km^2$ | 4 |
| Crown Timber Salvage Licence | variable | negligible | negligible |
| **Québec**[i] | | 34 000 | |
| CAAF Agreements | approx. 300 | 34 000 | 100 |
| Miscellaneous Permits | variable | negligible | 0 |

**Table 2. Distribution of Provincial Allowable Annual Cuts by Tenure (*continued*)**

| Province/Tenure | Number of Tenures | Committed AAC ('000 m³) | % of Provincial Committed AAC |
|---|---|---|---|
| **New Brunswick**[j] | | 5 100 | |
| Crown Timber Licence | 10 | 3 700 | 73 |
| Sub-Licence | 117 | 1 400 | 27 |
| Crown Timber Permit | variable | negligible | 0 |
| **Nova Scotia**[k] | | 1 002 | |
| Licence and Management Agreement | 2 | 857 | 86 |
| Utilization Licence Agreement | 17 | 137 | 14 |
| Timber Licence | 30 | 8 | negligible |
| Letters of Authority | variable | negligible | 0 |
| **Prince Edward Island**[l] | 36 | | |
| Forest Product Sales Permit | variable | 14 | 100 |
| **Newfoundland**[m] | | 2 400 | |
| Leased and Licensed Lands | 100-200 | 1 629 | 65 |
| Short Term Timber Licence | 1 | 181 | 10 |
| Cutting Permit | Approx. 30 000 | 590 | 25 |

[a] Totals exclude special licences. Source: British Columbia Ministry of Forests and Lands, 1987a, 1989a.
[b] This percentage is expected to double under 1987 policy amendments (Ministry of Forests and Lands, 1987b).
[c] Timber Sale Harvesting Licences are historical tenures which have now all been replaced. Unfortunately, updated information about AACs is unavailable.
[d] Timber from the reserve is sold under Timber Sale Licences, Forest Licences and Miscellaneous Permits.
[e] Source: Alberta Forestry, Lands, and Wildlife. 1989b. Timber Management Branch. Timber Management Statistics. Amendment Number 8. Dated 89-01-31.
[f] Source: Saskatchewan Parks, Recreation and Culture, 1989.
[g] Source: Manitoba Forestry Branch, 1989 (1986/87 information).
[h] Ontario tenures have annual allowable cuts based on productive forest area. Source: Ontario Ministry of Natural Resources, 1989.
[i] Source: Quebec sous-ministre associé aux Forêts, 1989.
[j] Source: New Brunswick Dept. of Natural Resources and Energy, 1989.
[k] Source: Nova Scotia Department of Lands and Forests, 1989.
[l] The provincial AAC represents the total AAC on Crown Lands. Permits are the only significant means of committing the AAC and currently allocate approximately 40% of the Provincial AAC on Crown Lands. Source: Prince Edward Island Department of Energy and Foresta, 1989.
[m] Estimated only, precise information is not available. Due to the long term nature of Leased and Licenced lands, freehold land is included in these inventory and wood supply figures. Source: Newfoundland Department of Forestry, 1989.

## Table 3. Characteristics of Provincial Forest Tenures

| | Comprehensiveness | | Transferability | | Right of Holder to Benefits | | | | Operational Stipulations | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Timber Harvesting and Management | Timber Harvesting Only | Tenure Transferable with Consent | Unprocessed Timber Export Restrictions Provincial and/or Federal | Stumpage Varies by Location | Stumpage Fixed for the Entire Province | Holding or Rental Charge | Protection and/or Management Charge | Reforestation Requirements | Protection Requirements |
| **British Columbia** | | | | | | | | | | |
| Tree Farm Licence | X | – | X | X | X | – | X | – | X | X |
| Forest Licence | X | – | X | X | X | – | X | – | X | X |
| Major Timber Sale Licence | V | V | X | X | X | – | X | – | V | X |
| Minor Timber Sale Licence | – | X | X | X | X | – | X | – | – | X |
| Timber Licence | X | – | X | X | – | X | X | – | X | X |
| Pulpwood Agreement | V | V | X | X | X | – | X | – | V | X |
| Woodlot Licence | X | – | X | X | X | – | X | – | X | X |
| **Alberta** | | | | | | | | | | |
| Forest Management Agreement | X | – | X | X | X | – | X | X | X | – |
| Timber Quota | V | V | X | X | X | – | X | X | V | – |
| Timber Permit | – | X | V | X | X | – | X | X | – | – |
| **Saskatchewan** | | | | | | | | | | |
| Forest Management Licence Agreement | X | – | X | X | X | – | – | X | S | – |
| Timber Permit | – | X | – | X | X | – | – | V | – | – |
| **Manitoba** | | | | | | | | | | |
| Forest Management Licence | X | – | X | X | X | – | – | – | S | – |
| Timber Sale Agreement | – | X | X | X | X | – | – | – | – | – |
| Timber Permit | – | X | – | X | X | – | – | – | – | – |
| **Ontario** | | | | | | | | | | |
| Forest Management Agreement | X | – | X | X | X | – | – | – | RS | – |
| Order in Council Licence | X | – | X | X | X | – | – | – | RS | – |
| Miscellaneous Licences | – | X | V | X | X | – | – | – | – | – |
| **Quebec** | | | | | | | | | | |
| CAAF Agreements | X | – | – | X | X | – | – | X | RS | X |
| Miscellaneous Permits | V | V | – | X | – | X | V | – | V | – |
| **New Brunswick** | | | | | | | | | | |
| Crown Timber Licence | X | – | X | X | – | X | – | – | R | X |
| Sub-Licence | – | X | X | X | – | X | – | – | – | X |
| Crown Timber Permit | – | X | – | X | X | – | – | – | – | – |
| **Nova Scotia** | | | | | | | | | | |
| Licence and Management Agreement | X | – | X | X | X | – | – | – | R | X |
| Utilization Licence Agreement | – | X | X | X | X | – | – | – | – | – |
| Timber Licence | – | X | X | X | X | – | – | – | – | – |
| **Prince Edward Island** | | | | | | | | | | |
| Forest Product Sales Permit | – | X | V | X | X | – | – | – | – | X |
| **Newfoundland** | | | | | | | | | | |
| Leased and Licenced Agreement | X | – | X | X | – | – | X | X | R | X |
| Short Term Timber Licence | X | – | – | X | – | X | – | – | R | X |
| Timber Permit | – | X | – | X | – | X | – | – | – | – |

| | Operational Stipulations | | | Duration (term) | | | | | Allotment Type | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Road Building Requirements | Required Operation of a Processing Plant | Harvesting Requirements | 0-5 Years | 6-15 Years | >15 Years | Evergreen | Renewable or at Expiration of Term | Area Allotment | Volume Allotment |
| **British Columbia** | | | | | | | | | | |
| Tree Farm Licence | X | X | X | – | – | X | X | – | X | – |
| Forest Licence | X | X | X | – | X | – | X | – | – | X |
| Major Timber Sale Licence | X | X | X | – | X | – | – | V | – | X |
| Minor Timber Sale Licence | X | – | X | V | V | – | – | – | – | X |
| Timber Licence | X | V | X | V | V | V | – | – | X | – |
| Pulpwood Agreement | X | X | X | – | – | X | X | – | – | X |
| Woodlot Licence | X | – | X | – | X | – | X | – | X | – |
| **Alberta** | | | | | | | | | | |
| Forest Management Agreement | X | X | X | – | – | X | – | X | X | – |
| Timber Quota | X | V | X | – | – | X | – | X | V | V |
| Timber Permit | X | V | X | X | – | – | – | – | – | X |
| **Saskatchewan** | | | | | | | | | | |
| Forest Management Licence Agreement | R | X | X | – | – | X | V | V | V | V |
| Timber Permit | X | – | X | X | – | – | – | – | – | X |
| **Manitoba** | | | | | | | | | | |
| Forest Management Licence | X | X | X | – | – | X | – | X | X | – |
| Timber Sale Agreement | X | – | X | V | V | – | – | X | – | X |
| Timber Permit | X | – | X | X | – | – | – | – | – | X |
| **Ontario** | | | | | | | | | | |
| Forest Management Agreement | R | X | X | – | – | X | X | – | X | – |
| Order in Council Licence | X | X | X | V | V | V | – | X | X | – |
| Miscellaneous Licences | V | V | X | X | – | – | – | V | X | – |
| **Quebec** | | | | | | | | | | |
| CAAF Agreements | R | X | X | – | – | X | X | – | – | X |
| Miscellaneous Permits | – | V | X | X | – | – | – | – | V | V |
| **New Brunswick** | | | | | | | | | | |
| Crown Timber Licence | X | X | X | – | – | X | X | – | X | – |
| Sub-Licence | X | X | X | X | – | – | X | – | – | X |
| Crown Timber Permit | V | – | X | X | – | – | – | – | – | X |
| **Nova Scotia** | | | | | | | | | | |
| Licence and Management Agreement | X | X | X | – | – | X | V | V | X | – |
| Utilisation Licence Agreement | R | X | X | – | X | – | – | X | – | X |
| Timber Licence | R | – | X | X | – | – | – | X | – | X |
| **Prince Edward Island** | | | | | | | | | | |
| Forest Product Sales Permit | V | – | X | X | – | – | – | V | V | V |
| **Newfoundland** | | | | | | | | | | |
| Leased and Licensed Agreement | X | – | X | – | – | X | – | V | X | – |
| Short Term Timber Licence | X | X | X | – | – | X | – | X | X | – |
| Timber Permit | – | – | X | X | – | – | – | X | – | X |

R = Partial or full reimbursement
S = Tree seedlings or seed
V = Conditions vary between agreements

All provincial forest tenures provide exclusive rights to harvest timber and/or associated forest products but none provide rights to non-timber forest products such as recreation, wildlife and water. In most cases, the Crown reserves the right to delete forest tenures, in whole or in part, with full or partial compensation, if it is deemed necessary to change the land use in the public interest.

Management responsibilities vary considerably among tenure types. Generally, holders of large, longer term tenures assume more management responsibilities than those with shorter term agreements and smaller areas or volumes. Notable exceptions are Woodlot Licences in British Columbia which delegate very broad management responsibilities to their holders.

No provincial forest tenures in Canada are freely transferable. With the exception of smaller, short-term tenures in a number of provinces and CAAF Agreements[5] in Quebec, they are transferable with Ministerial approval. In British Columbia, with the exception of Minor Timber Sales, approved tenure transfers are accompanied by 5 percent reductions in the allowable annual cuts of the units concerned, or, in the case of Timber Licences, a levy equal to 5 percent of the value of the standing timber.

In all provinces, for all tenure types, exports of unprocessed timber products - logs and pulp chips - are restricted. In some provinces both federal and provincial controls are imposed, in others only federal controls are in force.

The right of tenure holders to economic benefits, as influenced by stumpages, royalties and other levies, differ greatly across Canada. Stumpage is paid for timber cut from all provincial tenures with the exception of Leased and Licenced lands in Newfoundland where Crown charges are restricted to annual ground rents and protection fees. Methods of stumpage determination vary among provinces and, to some extent, among tenures within provinces. For most tenures, stumpage rates are determined administratively. In some cases, for example, Forest Management Licence Agreements in Saskatchewan and Licence and Management Agreements in Nova Scotia, rates are set following negotiations between licensees and the Crown. In most cases stumpage rates vary by location, for example in Quebec, 28 tariff zones are used in setting stumpage rates for CAAF Agreements, but in some instances, such as in New Brunswick, they are province-wide. In British Columbia, which until 1987 was the only province with a market-based stumpage appraisal system, stumpages for major tenure types are now determined by the "comparative value pricing system." A target annual revenue from the sale of stumpage is set by the Crown. The burden of this desired revenue is then distributed among tenure holders according to the **relative** appraised values of the stands being harvested.

In most provinces, markets play some role in the determination of stumpage rates. Administratively determined stumpage rates are commonly varied periodically in accordance with an index indicating relative changes in forest products' values. In Quebec and New Brunswick, stumpage rates are linked to market-determined prices for privately sold timber. In New Brunswick, stumpage rates for Crown Timber Licences are set at 70 percent of the prices realized in private sales in recognition of the relative inaccessibility of Crown timber and the additional costs borne by tenure holders. Some smaller tenures, such as Timber Sale Agreements in Manitoba, Timber Licences in Nova Scotia and Crown Timber Permits in New Brunswick, are sold competitively; bonus bids being accepted by sealed tender over and above administratively determined upset prices. However, only relatively minor volumes of timber are involved in such transactions. Only in British Columbia, under the Small Business Enterprise Forest Program, is a significant proportion of the annual allowable cut sold competitively. Competitive sales of this type accounted for about 7 percent of the provincial harvest from Crown land in 1987-88 but this figure is expected to double under forest policy amendments introduced in October, 1987 (British Columbia Ministry of Lands and Forests, 1987b).

Most provincial forest tenure agreements require their holders to carry out reforestation - frequently referred to as "basic silviculture." The only exceptions are some of the smaller tenures where reforestation remains the responsibility of the Crown. Where reforestation is required, the costs incurred by the tenure holder are frequently reimbursed, either partially or in full, by the Crown.

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[5] CAAF — Contrat d'approvisionnement et d'aménagement forestier.

The only provinces which require most tenure holders to bear the full costs of reforestation are British Columbia and Alberta.

Protection requirements vary widely among provinces and tenures within provinces. In British Columbia, all tenure holders have protection responsibilities although some of their costs may be reimbursed. On the other hand, in Alberta, Saskatchewan, Manitoba and Ontario, protection is the responsibility of the Crown. In the remaining provinces, protection is largely the tenure holders' responsibility for the larger tenures and in some cases the Crown's responsibility for small tenures.

Almost all tenure agreements delegate some road building responsibilities to their holders and all impose numerous harvesting requirements including timber utilization, or recovery standards, annual or periodic cut controls and environmental protection requirements. Holders of large, longer term tenures may be required to operate a timber processing plant.

Terms of tenures range from less than one year, for small cutting permits and miscellaneous licences in several provinces, to 99 years for Forest Leases and Licences in Newfoundland. The major tenure types held by large forest products companies are generally of 20 to 25 years duration. The conditions under which tenures can be renewed vary greatly. Many of the smaller, short-term tenures (less than 5 years) are non-renewable. Some agreements are only renewable for one additional term while others are renewable on an evergreen basis; that is, they are replaceable for their initial term at periodic intervals before their expiration date. For example, Tree Farm Licences in British Columbia, and Crown Timber Licences in New Brunswick have terms of 25 years but can be replaced every 10 years for additional 25 year terms. CAAF agreements in Quebec may be extended for 5 years every 5 years. In some cases, agreements are replaceable rather than renewable. That is, an existing agreement cannot be renewed but includes a contractual right to negotiate a new agreement to replace the old one. Such arrangements increase the discretionary powers of the Crown when an agreement expires. The durations of some agreements are set at the discretion of the provincial minister responsible for forestry.

# Part Four

## The Problems Governments face when Designing Forest Tenure Systems

Governments in Canada, as in any jurisdiction with significant areas of public forest land, face the task of establishing an institutional framework for public forest management which will effectively achieve society's objectives. An important component of such institutional arrangements is a tenure system. Although the "optimum forest tenure" is an elusive concept (Luckert, 1988), policy makers are in a better position to move their tenure system in the desired direction if more is known about the possible impacts of various tenure arrangements on the behaviour of tenure holders.

### Objectives of Forest Management

An institutional framework for the management of forests can only be well designed with reference to identified goals. Goals are not only an expression of the purposes of management but are an essential standard against which performance is measured. Public forest policies must serve many different goals. In addition to ensuring the creation of economic wealth from harvesting and processing timber, forest policies are called upon to create employment, maintain a constant or increasing supply of timber to sustain economic activities, ameliorate regional economic disparities, and recognize growing concerns for the production of non-timber forest products and the general quality of the forest environment. The bewildering array of forest tenures in Canada today, which were summarized in **Part Three** of this study, reflect the many and complex objectives provincial governments are trying to achieve by means of this policy instrument.

A major problem facing policy makers is that, even if broad social objectives are clearly and explicitly articulated at a political level, which is frequently not the case, these objectives must be expressed in ways which permit the establishment of operational goals which are, above all, measurable. Forest policies, including alternative tenure arrangements, can only be objectively evaluated if their projected outcomes can be compared to specific targets (Brumelle et al., 1988).

A second problem is that public forest policy objectives are invariably conflicting and any single goal cannot be pursued in isolation if society is to derive the maximum net benefits from its forest resources. For example, a tenure which is designed to produce the maximum economic wealth from harvesting and growing of timber will, almost certainly, fail to meet regional development goals. Or, a tenure which provides the optimum environment for the production of non- timber values will usually be unacceptable as a means of achieving timber supply goals. In designing forest tenures, policy makers must recognize the trade-offs inherent in the simultaneous pursuit of conflicting goals.

### The Benefits and Costs of Transferring Rights from the Public to the Private Sector

As shown previously, forest tenures can be described and compared in terms of which property rights or tenure characteristics they transfer to the private sector and to what degree. When a government limits the freedom of a private firm, or individual, by retaining control, in whole or in part, of one of the many characteristics which comprise a complete forest tenure, society enjoys some benefits but must also bear some costs. As Boyd and Hyde (1989) pointed out, "public ownership is a market intervention, and an important one," which by restricting responses to market signals, can have **positive** or **negative** impacts on social welfare. Simply stated, designing a forest tenure consists of estimating and comparing the benefits and costs, in terms of social objectives, of limiting the property rights of the private sector to varying degrees.

The level of public intervention in the management of forest tenures can, and does, vary widely. Each of the tenure characteristics described in **Part Two**, and used to describe and compare Canadian forest tenures in **Part Three** can be used in varying degrees to control private sector behaviour. At one extreme, a tenure holder may be granted complete and unfettered rights while, at the other extreme, rights may be completely retained by the government on behalf of society. For example, a

government may allow a tenure holder to transfer, or assign, his rights to public forest land to a third party under any conditions, or the transfer of tenure rights in any form might be completely prohibited. Between these two extremes, varying degree of transferability are possible.

Each tenure component, or characteristic, will now be examined in turn to identify the social benefits and costs of limiting tenure holders' rights.

**Comprehensiveness**

If property rights are less than completely comprehensive - for instance, if timber rights within a certain area are granted separately from mineral rights - resource allocation may be adversely affected. Whether non-comprehensive property rights result in a net loss to society depends on whether the benefits of specialization in the management of the separate resources involved exceed, or are less than, the costs of foregoing integrated management. For example, timber management and oil exploration and exploitation are highly differentiated operations, each requiring specialized managerial skills. Their separation may ensure that each is managed in an optimal manner by those with the most appropriate management skills. On the other hand, oil exploration and production can seriously disrupt forest management and can result in major costs for the forest industry, as experience in Alberta has shown.

If the resources in question are marketed, as in the case of oil and timber cited above, it could be argued that, in the absence of public intervention, market forces will weigh the benefits and costs of specialized **versus** comprehensive management and result in a resource-use strategy which is optimum from a market perspective. However, policy makers, faced with the task of deciding how comprehensive to make a forest tenure, frequently have to deal with the problem of non-marketed forest products. No forest tenure agreement in Canada grants the holder exclusive rights to manage for such non-timber products as outdoor recreation, wildlife and water, although the benefits of integrating the management of these resources with timber in a coordinated manner are well known. The problem, apart from the obvious political difficulties of assigning private management rights to these products, is that none of them is exchanged through normal market channels. It is unlikely, therefore, that tenure holders, lacking market signals and incentives, would produce these important products in socially desirable quantities and qualities. Hence, the rights to these non-marketed products are retained in the public domain and some of the benefits of coordinated land management are willingly sacrificed.

**Duration**

Restrictions on the duration, or term, of a tenure has important implications for the way in which the forest resource is managed. The term of a forest tenure specifies a time horizon when returns to any investments made in the forest resource must be realized. If an investment will provide an acceptable return within the duration of a tenure, the tenure holder's behaviour will be unaffected. However, restricting the duration of a tenure is likely to result in some investments being liquidated prematurely while others will simply not be undertaken voluntarily by the tenure holder, even though they may have resulted in significant net social benefits.

Pejovich (1984) discussed the effects of restricted time horizons on management. Any restriction of term, he pointed out, provides incentives to postpone costs and bring forward benefits. To drive home his point, Pejovich asked: "Do you take better care of the car you own or the car you rent? Do you take better care of the house you own or the house you rent?"

Although the advantages of very long term, or even perpetual, property rights are well recognized, practically all forest tenures in Canada are for 25 years or less. Twenty to twenty-five years is considered to be the maximum period required to amortize a manufacturing plant and thus these terms serve to encourage firms to establish processing facilities which are closely integrated with timber resources. Such arrangements are logical if the objective is to ensure the orderly harvesting and processing of mature timber. But, if the goal is to encourage investments in the

establishment and management of new forest crops, a term equal to the length of a forest rotation may be more appropriate.

Very long term tenures in forestry are widely recognized as advantageous, but the longer the duration of a tenure, the less control a government has over the use and re-allocation of the resources within its boundaries. Long-term tenures leave governments with less flexibility to meet changing social needs and preferences (Pearse, 1976).

The duration of a tenure and its effect on tenure holders, depends, not only on its initial term, but on whether the tenure may be renewed and under what conditions. A tenure which may be renewed with complete certainty is essentially the same as a perpetual tenure. However, if renewal is subject to the discretion of the public forest administration, or if the conditions under which the tenure is held can be varied significantly at the time of renewal, a degree of uncertainty is introduced which can influence the tenure holder's investment strategies. As mentioned in **Part Three**, to try and increase tenure security, several provinces in Canada have introduced "evergreen tenures" which give tenure holders the option, during the term of the tenure, to replace it with a new agreement with a term equal to that of the original. The degree to which such arrangements reduce tenure holders' uncertainty depends upon the extent to which governments can amend the conditions of the tenure agreement at the time of replacement.

**Transferability**

The importance of transferability of property rights in promoting the efficient use of resources is well documented in the literature: De Alessi (1980); Demsetz (1967); Pearse (1976); Scott (1984). Transferability of property rights allows markets to direct resources to their highest use. In doing so, resource users gain from comparative advantage, specialization and economies of scale. The flexibility which transferability allows is also necessary if resource use is to be adapted to changes in technology, incomes and consumer tastes and values. Additionally, transfers of property rights can correct initial misallocations of resources which may exist for a variety of reasons.

Restrictions on transferability may take two general forms. First, transfers may be restricted because markets for the asset are limited in some way. Such situations may exist because of inherent market imperfections such as oligopsony or monopsony or as a result of public intervention in the market place. Second, transfers of assets may be restricted directly by governments through legislation and/or regulations. For example, no Crown forest tenures in Canada are freely transferable.

Restrictions on the transferability of property rights has important effects on private sector behaviour. This is particularly serious if the investments necessary to utilize or improve the asset have relatively long time horizons, as in the case of forest resources. It has been pointed out (see, for example, Dowdle, 1984) that a major disincentive for investments in timber production is not that investment periods are long, which is the conventional wisdom, but that opportunities for disposing of goods in process are frequently constrained because transferability is restricted. Despite 70 to 100-year timber rotations, incentives may exist to invest in timber crops if their expected net present values are positive and there are no barriers, either market or administrative, to the sale of immature forest stands. Without such opportunities, investors face all-or-nothing situations. If they choose to invest in tree planting, they must accept that their assets will be frozen for up to 100 years or more. Few investors are willing to give up liquidity to this degree. A study conducted by Peat, Marwick and Partners (1981) found that forest industry executives across Canada showed a reluctance to invest in non-transferable assets which could not be liquidated before maturity.

Even though the case for freely transferable forest tenure rights is strong, many social benefits may result from restrictions. Pearse (1976) suggested three reasons why governments restrict transferability of forest resources. First, by doing so they can avoid "excessive concentration of timber rights, regional or local monopolies, strategic geographical advantages, or other impediments to competition." Second, they can forestall "consolidation or relocation of industrial activity that

seriously conflicts with community or regional stability or development objectives." And, finally, they can maintain "a suitable balance between domestic and foreign ownership and control."

In addition to controlling the transfer of tenures, restrictions may also extend to the sale of some products arising from the use of tenures. For example, in Canada there are both provincial and federal controls on the export of logs and other unmanufactured forest products. Forest land owners, as well as Crown tenure holders, must obtain a permit in order to export such products. Conditions under which permits can be issued are generally stringent and rigidly enforced. Provincial restrictions on unmanufactured forest product exports may even extend to interprovincial shipments. Such restrictions exist to create and maintain jobs which result from domestic secondary processing. However, limitations on the market opportunities for wood reduce the potential values of logs and standing timber and, by depressing anticipated rates of return to timber production, have a negative impact on forest investment activities (Pearse, 1984).

**Right of Tenure Holder to Economic Benefits**

The value of any asset is determined, in great measure, by the extent to which its holder can capture the economic benefits arising from its use. In the case of Crown forest tenures, the economic benefits accruing to the tenure holder are directly limited by the existence of taxes, stumpages, royalties, land rents and various other charges levied in return for specific services such as fire control or timber scaling. These are described in detail for forest tenures in Canada in **Part Three** and the Appendix to this study.

In addition to the impact of direct financial levies, tenure holders' economic benefits are reduced by a multitude of other requirements and regulations. In fact, any requirements attached to tenure agreements which limit their holders' freedom to manage, or dispose of, their holdings in ways which maximize their net returns, erode the tenure holders' rights to economic benefits and have an impact on management strategies. We will return to this important point later in the report.

**Exclusiveness**

In the absence of exclusive rights, common property prevails with all its well-documented problems (Scott, 1955; Hardin, 1968; Cheung, 1970). Everybody's property, it is said, is nobody's property. No individual has the incentive to invest in the renewal or management of a commonly held resource, since there is no guarantee of returns. No individual will conserve a commonly held resource because each person knows that if they are conservative in their use of the resource someone else will simply take a larger share. Common property is inevitably over used and degraded. Many of the world's most serious conservation problems arise because no exclusive property rights have been established to the resources concerned.

In spite of these many problems, common property may still be preferable to exclusive rights in certain cases. Cheung (1970) and others have pointed out that the transaction costs of defining, negotiating and enforcing exclusive property rights may be greater than the benefits gained by avoiding the inefficiencies associated with common property.

Non-exclusivity is not a problem to rights to harvest public timber in Canada, but some problems arising from non-exclusive rights are associated with Canadian forest tenures. In Alberta, for example, if a Timber Quota holder, through investments in silviculture, increases the allowable cut of the management unit in which his Quota is located, all holders of Timber Quotas in the unit benefit from this increase in cut which is prorated among them (Carroll, 1977). As a result, there is very little incentive for any individual Quota holders to undertake silvicultural investments which will, to a very great extent, be of benefit to their competitors.

There are other examples of non-exclusive rights to some non-timber forest products. Governments retain the rights to forest recreation and wildlife resources, but with the exception of some developed recreation facilities such as campsites and ski-slopes, they seldom exclude users of these resources by means of regulations or rationing devices. As a result, in certain situations, these

resources tend to be over used. For hunting or fishing this problem may be partially solved by the use of seasons or bag-limits, which may help to conserve the resource but do not solve the problem of too many hunters or fisherman and their impact on each other and the quality of the environment. For some recreational pursuits such as wilderness hiking, however, unrestricted access and over use, resulting in environmental degradation, persists.

There are several reasons why governments are reluctant to grant exclusive, or even limited, rights to non- timber forest resources. These include the many Canadians who regard free and unlimited access to public forest lands as a basic right which, politically, would be very difficult to abrogate. Also, in many cases, the costs associated with establishing and enforcing exclusive rights of access and use would exceed the benefits to be gained from doing so. As pressures on forest environments increase, this latter reason will become less compelling.

**Security**

As pointed out in **Part Two**, security is different from the other tenure characteristics. It does not describe a specific right which is transferred, in some degree, from the public to the private sector, but refers to the confidence tenure holders have in the inviolate nature of the property rights granted to them by their tenure agreements. To a great extent, security is a function of the trust tenure holders have in the socio- political system within which their rights have been granted. The confidence tenure holders have in their rights depends on their past experiences with the system and the probabilities they attach to the chance of detrimental changes taking place in the future. Specifically, security depends on the chance tenure holders attach to the renewal or replacement of their property rights when their term expires; the probability of tenure agreements being modified adversely during their term or at their expiration or renewal date; and the probability of rights being expropriated without adequate compensation. Holders with insecure tenures expect changes which will reduce the benefits they receive from them. Holders with secure tenures expect future changes affecting their rights to be minor, beneficial or non-existent.

Insecurity has a major impact on tenure holders' investment behaviour by reducing expected returns from current expenditures. Why would a private firm voluntarily invest in reforestation or stand management, for example, if it believes that there is a high probability that its tenure will not be renewed or that the resulting timber will be expropriated for some reason by the government? The greater the insecurity, the lower will be the prospective returns from investments and the less chance that such investments will be undertaken.

Research has revealed that forest tenure rights in certain provinces are subject to a relatively high degree of uncertainty (Luckert, 1988; Luckert and Haley, 1989b). Given the history of the forest tenure systems in these provinces and the absence of legally protected rights (Luckert and Haley, 1989a) this is not surprising.

**Use Restrictions**

Restrictions on the uses of resources can create the same problems as restrictions on the transferal of property rights. Regulations which prevent resources from being used in certain ways, limit the extent to which property rights holders can respond to market signals and may prevent resources moving into their highest and best use. Such problems can result from zoning regulations which create single use recreation areas, ecological reserves, forest reserves and agricultural reserves. Such restrictions reduce the values of forest tenures because they place a constraint on the tenure holders' rights to capture economic benefits. When use restrictions are introduced, those holding property rights to the resources in question may suffer unexpected losses, whereas, when use restrictions are lifted, or relaxed, property holders may enjoy windfall gains.

Use restrictions are frequently employed to ensure the provision of goods and services, such as recreation, soil conservation or flood control, which are not generally exchanged through market transactions, and thus may not be produced in response to normal market signals in a socially optimum manner. In some cases, use restrictions may be used to promote the production of marketed

products, such as timber, if social values derived from the products are not adequately considered by markets. Also, use restrictions in the form of zoning, are frequently used to mitigate the negative externalities of a particular resource use. This is often the justification for urban zoning and, in forest management, for requiring buffer zones between timber producing areas and intensively used recreation sites.

**Allotment Type**

Property rights to a resource may be granted over a specific geographical area, or they may simply take the form of a quota, or bag limit, to be taken periodically from within a very broadly defined region or management unit. This latter arrangement is commonly used for fish and wildlife resources and also for timber. Some forest tenures give their holders the right to harvest a certain volume of timber periodically, without specifying, except in the very broadest terms, where the harvesting will actually take place. These arrangements are usually referred to as "volume-based tenures" as opposed to "area-based tenures" and are an important feature of the tenure systems of several provinces (see **Part Three**).

Volume-based tenures provide governments with maximum flexibility in locating timber harvesting operations and allocating public forest land. However, these benefits may be accompanied by considerable public costs. Volume allotments do not provide incentives for tenure holders to manage the resource optimally over the long term. Holders of these tenures occupy an area only fleetingly - usually for 3 to 5 years - while they harvest the timber. Since they have no guarantee that they will ever return to the same area, no incentives exist for reforestation or even for timber harvesting in ways which preserve the productivity of the site. Such tenure arrangements may impose heavy transactions costs on society, since the enforcement of regulations in the public interest must be particularly rigorous. Furthermore, any site-specific knowledge gained by tenure holders from operating within the area of their allotment is lost when they move on to a new harvesting area.

**Size Specification**

The size of a tenure may influence its holder's economic behaviour. If property rights are transferable and divisible within a free market, there will be a tendency for tenures to adjust in size to a point where private economies of scale have been realized. However, Crown forest tenures in Canada are neither divisible nor freely transferable and their size, therefore, is usually the result of either legislation or administrative decisions.

When deciding on the size of a tenure, public decision makers must strike a balance between opposing considerations. On the one hand, a tenure should be large enough to allow advantage to be taken of all the economies of scale in management and, in the case of a tenure which is integrated with processing facilities, in manufacturing. On this basis, tenures which transfer substantial management responsibilities to their holders will generally be larger than those which retain most management functions as a public responsibility. On the other hand, there is a danger that tenures are so large that they result in the creation of local monopolies and monopsonies. The costs, in economic, political and social terms, of such serious market imperfections may exceed the benefits of realizing economies of scale.

**Operational Stipulations**

Contractual requirements, or operational stipulations, are important components of forest tenure agreements but may vary widely in their scope and the rigour with which they are enforced. The more stringent the operational requirements, the less discretionary room tenure holders have to make decisions. Where public and private objectives coincide and/or tenure holders have incentives to follow courses of action which further public objectives, operational stipulations can be reduced, although some operational rules to protect the public interest are inevitable. Conversely, if tenure holders' rights do not provide them with the necessary incentives to pursue publicly acceptable goals, very detailed and comprehensive contractual requirements may be necessary. Even in the case of

highly regulated tenures, some discretionary freedom always remains as tenure holders may choose how closely to follow requirements and to what degree they are willing to risk penalties for non-compliance.

Where it is appropriate, discretionary freedom for tenure holders to pursue their own management strategies has many advantages from both public and private perspectives. Freedom of choice afforded to tenure holders promotes allocative efficiency by allowing the public sector to take full advantage of the private sectors' expertise and local, on-site experience. In addition, it creates a more harmonious working relationship between public and private employees. Thus, important questions which public policy makers must address are: to what extent do private and public interests coincide and how can a tenure agreement be designed with the appropriate balance of regulations and discretionary freedom to accommodate these common goals while protecting the public interest in other respects.

### Operational Controls

In administering forest tenures, governments must ensure that contractual terms and conditions are adequately monitored and enforced. Operational controls impose costs on both parties to a tenure agreement. The public sector must bear the costs of monitoring diverse and widely spread operations and of proving and penalizing breaches of contract where they occur. The private sector bears the costs of additional record keeping and the preparation and submission of plans, progress reports and permit applications. At both the public and private levels, expensive bureaucracies become necessary which frequently involve technical and professional personnel with high opportunity costs. The more rigorous the controls, the higher these costs will be. However, the less stringent monitoring and enforcement procedures are, the more incentive there is for tenure holders to ignore regulations and risk being penalized.

### Further Problems in Designing Forest Tenures

In the foregoing section, the social benefits and costs of limiting the rights of forest tenure holders in various ways have been described. Clearly, choosing that degree of public intervention which is optimal for each tenure characteristic is a formidable task. However, designing a complete forest tenure system is further complicated by two additional problems: interdependencies among characteristics of tenures and interdependencies among tenure types.

### Interdependencies Among Characteristics of Tenures

Even if agreement can be reached on the appropriate mix of private and public control for each tenure characteristic, simply aggregating these individual components into a complete tenure agreement may be unsatisfactory, in terms of social objectives, because the tenure characteristics are highly interrelated. Limiting the discretionary freedom of tenure holders in any way has an impact on their right to capture the economic benefits their tenures are capable of generating. Modifying the rights of tenure holders to economic benefits can have serious policy implications. This phenomenon is well illustrated by a tenure problem currently facing provincial governments across Canada; namely, how to create incentives within the forest tenure system which will encourage the private sector to voluntarily invest in silviculture on Crown land.[6]

As old-growth forests are depleted, provincial governments are increasingly faced with the problem of designing policies which will ensure that harvested public lands are reforested and the resulting timber crops managed in the best public interest. Governments have found that, in most cases, current policy arrangements provide no incentives for tenure holders to invest voluntarily in silviculture on public land. As a result, governments have had to resort to regulations which require tenure holders to meet statutory silvicultural standards, with or without reimbursement of their

[6] For a detailed discussion of funding mechanisms for silviculture on Crown land in Canada see Luckert and Haley (1989b).

operating costs. Why are incentives to voluntarily practice silviculture both lacking and difficult to introduce? The answer to this question is twofold.

First, private firms will only undertake silvicultural operations voluntarily if they believe that the returns they will recoup from such expenditures will exceed their investment costs by a sufficient margin. To satisfy this condition, forest tenure holders must have an equity share in the value of either future timber crops or increases in allowable annual harvests resulting from their efforts. An important objective of most tenure agreements in Canada is to extract returns, or economic rents, from old-growth timber crops for the benefit of the public owners of the resource. These rents are collected either directly in the form of stumpages or royalties, or indirectly through contractual requirements or limitations on tenure holder's rights which are considered necessary to achieve public objectives. Any operational requirement, such as utilization standards or environmental quality standards, or any limitation on tenure holders' property rights, such as use restrictions or controls over transferability, impose costs on tenure holders and reduce their rights to economic benefits.

In the case of old growth, a balance has been reached between private rights and public controls which allows tenure holders returns from old-growth timber to be high enough to encourage them to harvest the resource. Although policies designed to collect old-growth rents work for naturally occurring timber stands which are not the result of human intervention, application of the same principles to cutover lands has failed to provide adequate incentives for silvicultural treatments. Stumpage charges, when combined with the private costs of other tenure requirements and controls, frequently do not leave sufficient returns for reforestation and stand management costs to justify their implementation. Tenures which only transfer rights to harvest public timber, do not provide rights to grow timber on public land and, therefore, fail to encourage voluntary private silvicultural activities. To provide adequate incentives for private firms to invest in silviculture on public land, governments must recognize the interrelationships between the right of holder to economic benefits and all of the other tenure characteristics which reduce this right. Furthermore, governments must be prepared to modify their tenure arrangements in ways which will reduce public control over Crown forest land and lower returns from the sale of public timber in the future.

A second impediment to private investment in silviculture on Crown lands is tenure insecurity. Even if private firms have a share in the value of future timber crops, they will not invest in timber production if the prospect of collecting these returns is uncertain. Any prospective change in the conditions under which a tenure is held, which threatens to reduce the holder's rights to economic benefits, will serve to increase tenure insecurity. Increasing social pressures on forest land for the production of non-timber values suggests that changes in forest tenure holders' rights will accelerate in the future, rather than diminish, and that tenure insecurity will become more of a problem.

The complications of designing tenure policy which arise as a result of the interrelationships among tenure holders' rights to benefits, security, and their subsequent behaviour, represent only a small portion of the interdependencies which exist between tenure characteristics. Practically all characteristics of forest tenures are interrelated because they have evolved as packages of property rights. Thus, an important aspect of understanding interdependencies between tenure characteristics is realizing how and why complete tenures have evolved and what role they play within the entire tenure system.

### Interdependencies Among Types of Tenures

Another complication which arises in designing a public forest tenure is that the efficiency with which a particular tenure arrangement will achieve social objectives depends upon the structure of the complete tenure system within the jurisdiction concerned. This point can be illustrated with a simple example.

Suppose that in a particular political jurisdiction all the forest land is publicly owned and timber harvesting rights are transferred to the private sector by means of short term, heavily regulated contracts. In the absence of market forces, major allocative problems exist which impose high social costs, in terms of foregone efficiency. In addition, insufficient private capital is being

attracted into the forest sector to harvest and process the timber resource efficiently. To overcome these problems, the government decides to transfer 25 percent of the forest land into large, area-based, long-term tenures which transfer considerable management responsibilities to the private sector. The policy is successful in terms of the government's objectives and is politically popular. The government reasons that, if having 25 percent of the land in long-term tenures is good, placing 50 percent under similar arrangements will be better, and proceeds to do so. However, problems begin to emerge and public support for the government's forest policy declines. The costs associated with displacing small loggers and forest products manufacturers, reducing the government's freedom to allocate land to its highest social use and increasing concentration in private control of the public resource, are now considered to be higher than the benefits of increased allocative efficiency under the new tenure policy. In other words, the government has discovered diminishing marginal returns to its tenure reforms. A tenure arrangement which was considered to be desirable in one situation proved to be socially unacceptable once the mix of tenures within the jurisdiction had been modified. This example also suggests why a tenure which is very successful in one area may prove to be undesirable when transferred to another jurisdiction.

# Part Five

## Summary and Conclusions

In this study, the role of property rights as instruments of public policy has been discussed. It has been shown that in Canada, where 94 percent of the forest land is publicly owned, the history of forest policy has been dominated by the emergence and evolution of tenure arrangements designed to transfer Crown timber harvesting rights and, in some cases, management responsibilities, to the private sector. Today, there exists a complex array of provincial forest tenures, each with a unique set of characteristics which influence, in very different ways, tenure holders' behaviour. The objective of this study was to identify and compare forest tenure arrangements in the Canadian provinces to promote a better understanding of the complex system which currently exists and provide a framework for the further analysis of tenure policy.

Ten characteristics which are postulated to have an impact on the behaviour of forest tenure holders were identified. These included: comprehensiveness; duration, or term; transferability; right of tenure holder to economic benefits; exclusiveness; security; use restrictions; allotment type; size specification; operational stipulations and operational controls. Thirty-four provincial forest tenure types were described, classified and compared in accordance with these characteristics.

It was suggested that governments, when designing or amending forest tenure arrangements to meet public objectives more effectively, are faced with the task of estimating the social benefits and costs of limiting the property rights of private sector tenure holders to varying degrees. These benefits and costs were described for each of the forest tenure components, or characteristics, identified as having a possible impact on private sector behaviour. It was also pointed out that additional problems in designing "optimum" tenures include interdependencies among tenure characteristics and interdependencies among tenure types.

The provinces face many common problems with respect to forest policy, some of which call for innovative changes to existing tenure systems if they are to be successfully resolved. For example, current tenure systems have evolved to provide for the harvesting of over-mature timber in an orderly manner which recognizes the social costs and benefits of timber production and society's interest in the protection of non-timber values. They are not well suited, in many ways, to deal with the problems of a second-growth forest economy in which timber resources are created through considerable public and private investments. Information provided in this study should help forest policy makers analyze existing forest tenures and develop new tenure arrangements to deal with existing and emerging problems. It should be emphasized, however, that the impacts of forest tenure characteristics on tenure holders' behaviour described in **Part Four**, while well documented in the literature, are, in most instances, only hypotheses based on our analyses and work to date.

In recent years, several provincial commissions and task forces have examined forest tenure systems and have made recommendations for tenure reform, many of which have been implemented. Although these recommendations have been predicated on both explicit and implicit assumptions about how individual tenure characteristics affect private sector behaviour, the assumptions made have seldom been theoretically justified or empirically tested. Some empirical research has examined how private firms actually behave within various forest tenure frameworks (Luckert, 1988). However, much remains to be done in this important area.

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# Appendix

## Characteristics of Provincial Crown Forest Tenures in Canada

# I. British Columbia

**Sources**


{1} British Columbia Forest Act, 1979.

{1a} Bill 70, 1987.[1]
{1b} Bill 28, 1988.[1]

{2} British Columbia Ministry of Forests and Lands, 1989.

{3} British Columbia Ministry of Forests and Lands, 1989a.

{4} British Columbia Ministry of Forests and Lands,1987b.

{5} British Columbia Ministry of Forests and Lands, 1987c.

{6} Campbell, 1980.

{7} Canadian Forestry Service, 1986.

{8} Canadian Pulp and Paper Association, 1988.

{9} Canadian Softwood Lumber Committee, 1983.

{10} Rawat, 1985.

{11} Reed, 1978.

{12} Sterling Wood Group Inc., 1985.


[1] The bill has gone through its final reading and is now law.

# Ia. British Columbia Tree Farm Licence[1]

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights and management responsibilities on most areas within the licence [{1} Sec 28(e), {12}].[2]

## Transferability

Tenures transferable with Minister's consent [{1} Sec 50]. When transferred, 5 percent of the tenure allowable annual cut will revert to the Crown {4}. Restricted exports of unmanufactured timber and wood residue from the province [{1} Sec 135].

## Rights of Holder to Economic Benefits

Costs

| | Coast | Interior |
|---|---|---|
| Stumpage {5}:[3] | $10.59/m$^3$ | $8.59/m$^3$ |
| Ground Rent {8}: | $0.45/m$^3$ | |

Benefits

Timber and the "allowable cut effect" [{1} Sec 28, {12}].

Stumpage system

The "comparative value pricing system" begins with a targeted average stumpage rate, determined by the Crown, and distributes the burden of the desired revenues among tenure holders according to the relative value of forest stands being harvested. Stumpage rates are adjusted quarterly for shifting market values according to softwood lumber price indices [{4}, {7}, {3} ].

## Operational Requirements

Reforestation

Holder must bear basic silvicultural costs {4}.

Protection

The holder is responsible for fire protection on occupied lands {3}, but may be reimbursed for suppression expenses unless the fire was caused by the tenure holder [{1} Sec 122]. The Crown and tenure holders may enter into agreements for the control or disposal of insects or disease and share the costs of control and disposal [{1} Sec 127].

Road Building

Holder must bear costs of roads and bridges. Roads built or upgraded to meet public needs will be borne by the Crown {4}.

Operation of Processing Plant

The Minister may require holder to operate a timber processing facility [{1} Sec 27(3)(b)].

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[1] Tree Farm Licences may be comprised of Crown lands, some of which may be Timber Licences, or a combination of Crown lands and private lands. Timber Licences are described separately in Section Ie. The following description refers to non-Timber Licence Crown lands, often referred to as Schedule B lands, which make up the vast majority of lands in Tree Farm Licences.

[2] Timber Sale Licences may be issued for volumes within Tree Farm Licences for the removal of dead or damaged timber or for special forest products [{1} Sec 56.1], or for allocations to the Small Business Forest Enterprise Program [{1b} Sec 28 (28) (2)].

[3] British Columbia recently changed its stumpage system with the intention that stumpage fees would average these values.

**Harvesting Requirements**

Holder must harvest within ± 50 percent of the allowable cut annually and within ± 10 percent of the allowable cut over 5 years [{1} Sec 55(1)]. Utilization requirements and environmental considerations must be followed in harvesting [{1} Sec 28 (g)(i)(d), 28 (g)(ii)].

**Other**

Holder is responsible for conducting a recreation inventory, but management activities may be conducted by the licensee, the province, or jointly. [{1} Sec 28(d), {3} ]. At least 50 percent of Schedule B lands must be harvested by logging contractors {12}.

**Duration**

25 years, 10 years evergreen [{1} Sec 29].

**Security**

Tenure may be cancelled for non-compliance with stipulations [{1} Sec 59-61]. No compensation is paid to holder for deletions of up to 5 percent of the allowable annual cut (AAC) [{1} Sec 53].

**Use Restrictions**

Crown land may be disposed of for any purpose that the chief forester considers to be compatible with the uses of provincial forests [{1} Sec 5(6)].

**Size Specifications**

Tenures are generally held by large forest product companies {9}. Minister may consolidate or subdivide licence with the consent of the licensee [{1} Sec 33(1)].

**Allotment Type**

Area allotment [{1} Sec 28 (b)(c)].

**Operational Control**

Government approval of management, working, development and pre-harvest silvicultural plans and cutting permit applications [{1} Sec 27(7), Sec 27(6), {3}]. Licensees are subject to periodic audits of performance {3} .

## Ib. British Columbia: Forest Licence

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights [{1} Sec 12(F)] and some management responsibilities (province is responsible for the strategic planning and inventory of Timber Supply Areas {10}).

### Transferability

Same as Ia. In addition, up to 10 percent of the allowable annual cut will be lost if converted to a Tree Farm Licence {4}.[1]

### Rights of Holder to Economic Benefits

#### Costs

Same as Ia except ground rent is $0.25/m^3$.

#### Benefits

Timber and the "allowable cut effect" [{1} Sec 52, {12}].

#### Stumpage system

Same as Ia.

### Operational Requirements

#### Reforestation

Same as Ia.

#### Protection

Same as Ia.

#### Road Building

Same as Ia.

#### Operation of Processing Plant

Holder must operate a timber processing facility [{1} Sec 12(g)].

#### Harvesting Requirements

Utilization requirements and environmental considerations must be followed in harvesting [{11}, {9}]. Holder must harvest within ± 50 percent of the allowable cut annually and within ± 10 percent of the allowable cut over 5 years. Where the cut is less than 50 000$m^3$, the regional manager may substitute different requirements [{1b} Sec 55].

#### Other

The regional manager may stipulate that some logging be contracted out [{1} Sec 12(b), {12}].

---

[1] The policy on whether to allow conversions of Forest Licences has not yet been finalized.

**Duration**

15 years (maximum of 20 years in exceptional cases), 5 years evergreen [{1} Sec 12(a), Sec 13, {12}].

**Security**

Same as Ia.

**Use Restrictions**

Same as Ia. Plus, the Lieutenant Governor-in-Council may cancel a provincial forest for higher social and economic benefits [{1} Sec 5(8)].

**Size Specifications**

Tenures generally held by medium to large companies {9}.

**Allotment Type**

Volume allotments {12}.

**Operational Control**

Government approval of management, working, development and pre-harvest silvicultural plans and cutting permit applications. Licensees are subject to periodic audits of performance [{1} Sec 12(e-f), {3}]

## Ic. British Columbia: Major Timber Sale Licence

### Comprehensiveness and Exclusiveness

If the holding is larger than 10 000 $m^3$ and replaceable, then the tenure holder has the right to harvest and is responsible for basic silviculture. If the holding is smaller or not replaceable, then the tenure holder only has harvesting rights [{2}, {3} ].

### Transferability

Same as Ib.

### Rights of Holder to Economic Benefits

#### Costs

Same as Ia except ground rent is $\$0.10/m^3$.

#### Benefits

Same as Ib.

#### Stumpage system

Same as Ia.

### Operational Requirements

#### Reforestation

Holder is responsible for reforestation if the licence is replaceable and has an AAC greater than 10 000 $m^3$ [{1a} Sec 3, {1} Sec 17(d.1), {3} ].

#### Protection

Same as Ia.

#### Road Building

Licensee is responsible for road building {3} .

#### Operation of Processing Plant

Same as Ib.

#### Harvesting Requirements

Utilization requirements and environmental considerations must be followed in harvesting {12}. Holder must harvest within ± 10 percent over a 5 year period [{1b} Sec 55].

#### Other

Same as Ib.

### Duration

10 years maximum [{1} Sec 17(a)]. Agreements with new applicants are not replaceable [{1b} Sec 16.1(6)] Old agreements may be replaced [{1} Sec 18(4)].

**Security**

Same as Ia.

**Use Restrictions**

Same as Ib.

**Size Specifications**

Generally small tenures issued when the volume required by the tenure holder is not large enough to warrant a Forest Licence {12}.

**Allotment Type**

Volume allotments {10}.

**Operational Control**

Government must approve development and pre-harvest silvicultural plans, cutting permits, and applications on replaceable licences {3}.

## Id. British Columbia: Minor Timber Sale Licence

**Comprehensiveness and Exclusiveness**

Exclusive timber harvesting rights only {12}.

**Transferability**

Same as Ia except that no AAC is lost when transferred.

**Rights of Holder to Economic Benefits**

Costs {3}

Stumpage:

Average stumpage for SBEFP[1] are $6-7/m^3$ bid above appraisal averages.

Ground rent: $1.25/ha

Benefits

Timber {12}.

Stumpage system

Competitive bidding above an appraised upset price which includes considerations of the Crown's costs of access and basic silviculture {2}.

**Operational Requirements**

Reforestation

Forest Service is responsible for reforestation {2}.

Protection

Same as Ia.

Road Building

Forest Service is responsible for main roads, while the licensee must construct secondary and spur roads {3}.

Operation of Processing Plant

Holder may or may not operate a processing plant {9}.

Harvesting Requirements

Same as Ic except that the tenure has no annual allowable cut {12}.

**Duration**

1-3 years, non-replaceable for traditional licences [{12}, Sec 16.2(6)]. 3-10 years for newer sales under Sec 16.1 {1b}.

---

[1] The Minor Timber Sale Licences are offered through the Small Business Enterprise Forest Program (SBEFP).

**Security**

Same as Ic except there is no AAC to be deleted.

**Use Restrictions**

Same as 1b.

**Size Specifications**

Tenure is usually held by small independent sawmill operators, independent loggers, and business buyers [{12}, {9}]. Holder must be registered as a "small business forest enterprise" [{1b} Sec 61.1].

**Allotment Type**

Area allotment {2}.

**Operational Control**

Government approval of logging plans and field inspections {3}.

## Ie. British Columbia: Timber Licence[1]

### Comprehensiveness and Exclusiveness

Exclusive harvesting rights to merchantable timber and some management responsibilities {12} (holder must reforest {10}).

### Transferability

Same as Ia except that if transferred, the tenure holder must pay 5 percent of the value of the standing timber in lieu of an AAC reduction [{1b} Sec 50(4)(d)].

### Rights of Holder to Economic Benefits

Costs

| | |
|---|---|
| Royalty: | $5.40/m$^3$ {4}. |
| Ground Rent: | $1.25/ha {3}. |

Benefits

Timber.

Stumpage system

Administratively set royalty dues {7}.

### Operational Requirements

Reforestation

Holder is responsible for reforestation[2] {10}.

Protection

Same as Ia.

Road Building

Holder is responsible for road building (see footnote[2]) {6}.

Operation of Processing Plant

Holders are not normally required to operate a processing plant but certain Timber Licences may include requirements {3}.

Harvesting Requirements

Harvesting restrictions are outlined in the operating plan {12}.

Other

Timber Licences are subject to other Tree Farm Licence conditions when within a Tree Farm Licence {3}.

---

[1] Outside Tree Farm Licences.

[2] With the implementation of the 1979 Forest Act {1}, Timber Licence holders were allowed to choose between paying stumpage fees or royalties plus costs of reforestation and road building. All holders opted for the latter alternative.

When outside of a Tree Farm Licence the Licence must be harvested according to a liquidation schedule {3}.

**Duration**

Variable (until mature timber is removed) {12}.

**Security**

Same as Ia except there is no AAC to be deleted.

**Use Restrictions**

Same as Ib.

**Size Specifications**

Holdings are generally medium sized and held by large companies {3}.

**Allotment Type**

Area allotments {10}.

**Operational Control**

Government approval of operating plan and cutting permits [{12}, {3}].

## If. British Columbia: Pulpwood Agreement

### Comprehensiveness and Exclusiveness

Exclusive rights to buy wood residues and harvest pulp wood with Timber Sale Licences if wood residues are insufficient [{1} Sec 35(d), Sec 35(e)].

### Transferability

Same as Ia.

### Rights of Holder to Economic Benefits

#### Costs

Stumpages as per Timber Sale Licences if one is issued {10}.

#### Benefits

Residues and pulpwood.

#### Stumpage system

Residues are bought at a pre-negotiated price from timber processing facilities and, if necessary, stumpage as per Timber Sale Licence {10}.

### Operational Requirements

#### Reforestation

Same as Ic.

#### Protection

Same as Timber Sale Licence if one is issued.

#### Road Building

Same as Timber Sale Licence if one is issued.

#### Operation of Processing Plant

Holder must operate a wood fibre processing facility [{1} Sec 34(4), Sec 35].

#### Harvesting Requirements

Same as Timber Sale Licence if one is issued.

#### Other

Applicants are reviewed in light of considerations for social and economic benefits and impacts on environmental quality [{1} Sec 34(6)(d), {3} ].

### Duration

Up to 25 years [{1} Sec 35(a)], 10 years "evergreen" [{1} Sec 36] but not all agreements are necessarily replaceable {3}.

### Security

Same as Ia.

**Use Restrictions**

Same as Ib.

**Size Specifications**

Agreements are large enough to supply a pulp mill [{1} Sec 40] and vary in size depending on fibre supply and mill requirements {3}.

**Allotment Type**

No allotment on residues. Area allotments if and when the need for standing pulp timber is proven [{3}, {12}].

**Operational Control**

Government approval of Timber Sale Licence: applications, management, working, development, and pre-harvest silvicultural plans, and field inspections {3}.

## Ig. British Columbia: Woodlot Licence

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights and management responsibilities [{1} Sec 42(c), {12}].

### Transferability

Tenures transferable with Minister's consent [{1} Sec 50]. The export of unmanufactured timber and wood residue from province is restricted [{1} Sec 135].

### Rights of Holder to Economic Benefits

Costs

Stumpage: same as Ia.
Ground Rent: same as Ib.

Benefits

Timber.

Stumpage system

Same as Ia.

### Operational Requirements

Reforestation

Holder is responsible for reforestation [{1a}, Sec 6].

Protection

Same as Ia.

Road Building

Licensee is responsible for road building.

Operation of Processing Plant

Holder may not own or control a timber processing facility [{1} Sec 41(5)(a)].

Harvesting Requirements

Environmental and utilization requirements are similar to Ia [{12}, {2}]. Cut controls are as for Ic.

Other

Preference is given to applicants whose place of residence and private land holdings consolidate well with Crown lands [{1} Sec 41(6)(a)(i)].

### Duration

Up to 15 years, 5 years "evergreen" [{1} Sec 42(a), Sec 43].

### Security

Same as Ia.

**Use Restrictions**

Same as Ib.

**Size Specifications**

Crown land portion cannot exceed 400 hectares [{1} Sec 42(ii)].

**Allotment Type**

Area allotment {9}.

**Operational Control**

Government approval of application, management, working, development, and pre-harvest silvicultural plans and field inspections. [{1} Sec 41(9), Sec 42(g), {3}].

## Ih. British Columbia: Miscellaneous Permits

The Crown may issue permits to use forests in various ways such as for gathering firewood or harvesting Christmas trees. These permits are generally for periods of less than one year and permit access to small volumes or areas of forests. Conditions of these permits vary considerably and are at the discretion of the forest officer [{1} Part 3, Div 8].

# II. Alberta

**Sources**

{1} The Alberta Forest Act, 1980.

{2} The Alberta Forest and Prairie Protection Regulations, 1962.

{3} Alberta Forestry Lands and Wildlife, 1989.

{4} The Alberta Timber Management Regulation, 1973.

{5} Banks, 1986.

{6} Canadian Forestry Service, 1986.

{7} Canadian Pulp and Paper Association, 1988.

{8} Canadian Softwood Lumber Committee, 1983.

{9} Carroll, 1977.

{10} Crossley, 1985.

{11} Rawat, 1985.

{12} Sterling Wood Group, Inc., 1985.

# IIa. Alberta: Forest Management Agreement

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights {5} and management responsibilities {9}.

## Transferability

Tenure transferable with Minister's approval [{1} Sec 16(3)]. Transfer must be an unconditional transfer of the entire interest [{1} Sec 14(4)]. Export of logs, trees, or wood chips out of province is not permitted without government approval [{1} Sec 31(2)].

## Rights of Holder to Economic Benefits

Costs {3}

| | |
|---|---|
| Stumpage | |
| Pulpwood | |
| coniferous | $0.53 - 2.09/m$^3$ |
| deciduous | $0.25 - 0.83/m$^3$ |
| Sawlogs | |
| coniferous | $0.52 - 0.70/m3 |
| deciduous | $0.25/m$^3$ |
| Holding Fees | $1.16 - 3.64/km$^2$ |
| Protection Fees[1] | $5.77 - 27.31/km$^2$ |

Benefits

Timber and "allowable cut effect" {5}. No stumpage is payable on additional wood produced above prescribed levels [{10}, {3}].

Stumpage system

Rates are specified in the agreements and are adjusted periodically {6}.

## Operational Requirements

Reforestation

Holder must reforest to government standards [{5}, {4} Sec 123, 132, 137(1)]. Holder must bear costs {12}.

Protection

Government is responsible for all protection activities [{12}, {6}].

Road Building

Holder is responsible for road building {12}.

Operation of Processing Plant

Preference is given to applicants who show ability to utilize timber and increase yields {12}.

---

[1] Adjusted annually to reflect changes in the Consumer Price Index or the Annual Implicit Price Index for Government Expenditures.

**Harvesting Requirements**

Holder must abide by utilization requirements [{4} Sec 100, {2} Part II] and must act so as to conserve soil and water {9}. The amount harvested annually must be in accordance with an approved management plan. Cut control requirements are defined in each agreement {3}.

**Other**

Holder is responsible for inventory and planning at their own cost {12}.

**Duration**

20 years, renewable {9}.

**Security**

Government may suspend or cancel an agreement if the holder fails to comply with any term of the agreement [{1} Sec 25(2)].

**Use Restrictions**

The Minister may withdraw lands from forest management agreements for alternative land uses in accordance with specific clauses in each agreement {3}.

**Size Specifications**

Generally held by large companies {8} with tenures ranging from 2 200 to 24 000 $km^2$ {3}.

**Allotment Type**

Area allotments {11}.

**Operational Control**

Government approval of management, development, and operating plans for each agreement {3}.

# IIb. Alberta: Timber Quotas[1]

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights with some management responsibility (small holders may reforest or pay the government to reforest) {9}.

## Transferability

Tenure transferable with Minister's approval [{1} Sec 28(2)]. Transfer must be an unconditional transfer of the entire interest [{1} Sec 28(3)] Export of logs, trees, or wood chips out of province is not permitted without government approval [{1} Sec 31(2)].

## Rights of Holder to Economic Benefits

Costs {3}

| | | |
|---|---|---|
| Stumpage | | |
| Pulpwood | | $0.13 - 0.53/m^3$ |
| Saw logs | coniferous | $0.18 - 0.70/m^3$ (± appraised rate as explained under stumpage system below) |
| | hardwoods | $0.25 - 1.28/m^3$ |
| Holding and protection fees | | |
| coniferous | | $0.15/m^3$ per yr |
| hardwoods | | $1.25/ha per yr or $.02/m^3 per yr |

Benefits

Timber and "indirect allowable cut effect"[2] {9}.

Stumpage system

Dues are set by regulation. Charges on coniferous volumes may vary ± $0.52/m^3$ due to appraisals which consider haul distance, volume per hectare, volume per tree, and the amount of defect per unit volume relative to the provincial average {6}.

## Operational Requirements

Reforestation

The holder shall either pay for reforestation or reforest, whichever the Minister directs {5}. However, if quota volume is greater than 34 000 $m^3$ then the quota holder must carry out reforestation [{4} Sec 126.1].

Protection

Same as IIa.

Road Building

Same as IIa.

---

[1] A Timber Quota is a percent share of the AAC in a management unit. Actual harvest authority is provided by a Timber Licence that is issued in conjunction with the quota [{5}, {3}].

[2] Several "floating" quotas exist within a management unit resulting in a shared "allowable cut effect" with other tenure holders in the same unit.

**Operation of Processing Plant**

Some coniferous timber quota holders must operate a sawmill within 35 kilometres of an Albertan town {5}, however, most quotas are not tied to a processing plant {3}.

**Harvesting Requirements**

Same as IIa.

**Other**

Forest service develops management plans {12}.

**Duration**

20 years, renewable [{1} Sec 18(1), 18(5), 20].

**Security**

Minister may alter or vary any provision, condition or area of a quota [{1} Sec 26]

**Use Restrictions**

Minister may change the designations of land uses {3}.

**Size Specifications**

Holders are commonly sawmill operators {8}. Sizes range from approximately 400 to 480 000 $m^3$/yr {3}.

**Allotment Type**

Volume allotments {11}. Deciduous timber quotas may allot a volume or an area of timber {5}.

**Operational Control**

Government approval of development and operating plans {3}.

## IIc. Alberta: Timber Permits[1]

### Comprehensiveness and Exclusiveness

Exclusive timber rights only {9}.

### Transferability

Commercial permits are transferable with the approval of the Minister [{4} Sec 154]. Local Timber Permits cannot be assigned [{4} Sec 162].

### Rights of Holder to Economic Benefits

Costs {7}

Stumpage: Same as IIb for Commercial Timber Permits. There are no appraisals for Local Timber Permits. Rates for miscellaneous products are specified in the Timber Management regulations [{4} Sec 75-86].

Annual holding and protection charges

| | |
|---|---|
| green coniferous timber | $0.25/ha per yr. |
| deciduous timber | $0.10/ha per yr. |

Benefits

Timber

Stumpage system

Same as IIb for Commercial Timber Permits there are no appraisals for Local Timber Permits.

### Operational Requirements

Reforestation

Permittee pays a reforestation levy and the Forest Service does the reforestation {3}.

Protection

Government is responsible for protection {5}.

Road Building

Holder must construct all necessary roads {12}.

Operation of Processing Plant

In most cases, the holder is not required to operate a processing plant {3}.

Harvesting Requirements

Utilization and environmental guidelines must be followed [{9}, {4} Sec 100, {2} Part II].

Other

The Forest Service develops the management plan for the permit harvesting area {3}.

---

[1] Timber Permits include Commercial and Local Timber Permits.

**Duration**

No specification of maximum term {5}, but generally less than 5 years, non-renewable [{12}, {3}].

**Security**

Same as IIb.

**Use Restrictions**

Same as IIb.

**Size Specifications**

Small tenures, generally for personal use or small businesses [{12}, {3}].

**Allotment Type**

Volume allotments {5}.

**Operational Control**

Same as IIb except that operating plans may not be required [{8}, {3}].

# III. Saskatchewan

**Sources**


{1} Canadian Forestry Service, 1986.

{2} Canadian Softwood Lumber Committee, 1983.

{3} Rawat, 1985.

{4} The Saskatchewan Forest Act, 1965.

{4a} Amendment to the Forest Act, 1986-87-88.

{5} The Saskatchewan Forest Regulations, 1967.

{6} Saskatchewan Parks, Recreation and Culture, 1989.

{7} Sterling Wood Group, Inc., 1985.

{8} Weyerhaeuser Canada Ltd., 1986.

## IIIa. Saskatchewan: Forest Management Licence Agreement (FMLA)[1]

### Comprehensiveness and Exclusiveness

Generally, exclusive timber harvesting rights and management responsibilities {2}.[2]

### Transferability

Tenure transferable with Minister's consent [{5} Sec 53]. Forest product exports in unprocessed form are only allowed with the Minister's consent [{5} Sec 48].

### Rights of Holder to Economic Benefits

Costs

| | |
|---|---|
| Stumpage {6} | |
| Conifers | $0.50 - 2.25/m$^3$ |
| Deciduous | $0.15 - 0.31/m$^3$ |
| Average for all FMLA holders | $0.93/m$^3$ {1}. |
| Other charges | |
| Reforestation[3] | |
| Conifers | $1.15 - 2.30/m$^3$ |
| Deciduous | $0.30 - 0.50/m$^3$ |

Benefits

Timber. Two of the newer agreements allow tenure holders to increase their AAC if current silvicultural activities are shown to increase future yields. {8}.

Stumpage system

Negotiated dues adjusted annually in accordance with the Madison Lumber Reporter average reported net mill selling price for SPF studs {1}.

### Operational Requirements

Reforestation

Holder is responsible for reforestation {7} and may be required to pay a fee to a renewal fund {4a}. Minister provides seedlings free of charge {8}.

Protection

Province is responsible for protection [{7}, {1}] and may impose an annual fire prevention levy against licence holder [{5} Sec 21(c)].

Road Building

Holder is responsible for road building and maintenance {1}, but may enter into an agreement with the Minister to jointly fund construction {6}.

---

[1] There are currently five agreements, each having differing characteristics. Three FMLAs are relatively new having been signed since 1986. The other two FMLAs were signed in 1975 and 1969 {6}.

[2] Two of the new FMLAs only grant exclusive rights on the core area of their leases. On the reserve areas, they have the right of first refusal on timber.

[3] For the Old Agreements, one licensee does not pay a reforestation fee while another pays 10 percent of the previous year's stumpage. The newer licensees pay the fee into a trust fund for their later use.

**Operation of Processing Plant**

Holder must operate a processing plant [{4} Sec 22(5)].

**Harvesting Requirements**

Holder must follow utilization requirements [{5} Sec 4]. Newer agreements require holders to maintain environmental quality {6}. Newer agreements require holders to maintain LRSY and have harvesting plans approved by the Minister {6}.

**Other**

Minister may order and direct wood residue transfers [{4} Sec 23].

One newer agreement allows the tenure holder the right of first refusal to purchase all suitable pulp furnish produced in the province {6}.

**Duration**

Up to 20 years [{5} Sec 36], renewable [{4} Sec 19(2)]. Newer agreements are 5 year evergreen {6}.

**Security**

Government may withdraw any portion of a tenure if it believes the holder has sufficient supply [{4} Sec 22(1-2)]. Withdrawals may also be made for game, wilderness, water or aesthetic and artistic values [{5} Sec 45]. On newer agreements only 5 percent may be withdrawn over 100 years without compensation (only 0.5 percent in any 10-year period) {6}.

**Use Restrictions**

The Lieutenant Governor-in-Council can lease provincial forest land for non-forest uses for periods up to 33 years [{4} Sec 5(1)(d)].

**Size Specifications**

Generally large tenures. Newer agreements range from 100 000 to 2 000 000 $m^3$/yr {6}.

**Allotment Type**

Generally area allotments {6}.[4]

**Operational Control**

The Minister may return the plan to the licencee for amendment {6}.

---

[4] One older Agreement is volume based.

## IIIb. Saskatchewan: Term Cutting Agreement

While this form of tenure is allowed for in the Forest Act [{4} Sec 55-58], there are currently none in existence. All Term Cutting Agreements have expired and it is anticipated that no new ones will be issued until the tenure is substantially changed to give the tenure holder more security and responsibility for forest management {6}.

## IIIc. Saskatchewan: Timber Permit[1]

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only {7}.

### Transferability

Permits are technically not transferable, however permits for unneeded allotments may be cancelled and the volume transferred to another permit holder {6}. Forest product exports in unprocessed form are only allowed with the Minister's consent [{5} Sec 48].

### Rights of Holder to Economic Benefits

Costs

Stumpage: Average for all non-FMLA holders $2.31/m^3$ {1}.

Benefits

Timber.

Stumpage system

Dues are set by regulation and adjusted annually in accordance with the average net mill selling price for utility and better grade studs {1}.

### Operational Requirements

Reforestation

Government is responsible for reforestation unless permits are issued on an FMLA lease area. In these cases, the permit holder must contribute to the FMLA holder's trust fund for the lease holder to carry out the work {6}.

Protection

Government is responsible for protection {1}.

Road Building

The permit holder is responsible for building any necessary roads, if an FMLA holder's roads are used, a road user agreement is entered into {6}.

Operation of Processing Plant

Permit holders are not required to operate a processing plant {6}.

Harvesting Requirements

Permit holders must follow utilization standards and any special harvesting conditions specified on the permit {6}.

### Duration

Up to 1 year[2] [{5} Sec 15, 27(i)]. Technically non- renewable but old permits may be replaced by new ones [{5} Sec 14, 17(1)].

---

[1] Includes timber sales.

[2] All timber permits expire yearly on March 31.

**Security**

The Government may cancel, suspend or alter the conditions of permits for due cause {6}.

**Use Restrictions**

Same as IIIa.

**Size Specifications**

Generally small, usually for part-time operators {2} or for personal uses {7}, however some larger operators do get their wood through the permit system {6}.

**Allotment Type**

Volume allotments {3}.

**Operational Control**

Some inspections are done at the district level, but in most cases, very little control is exerted {6}.

# IV. Manitoba

**Sources**

{1} Canadian Forestry Service, 1986.

{2} Canadian Pulp and Paper Association, 1988.

{3} Canadian Softwood Lumber Committee, 1983.

{4} The Manitoba Forest Act, 1987.

{5} The Manitoba Forest Regulations, 1988.

{6} Manitoba Forestry Branch, 1989.

{7} Sterling Wood Group, Inc., 1985.

# IVa. Manitoba: Forest Management Licence (FML)[1]

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights [{4} Sec 19(4)] and some management responsibilities (province is responsible for inventory and AAC calculations {7}).

## Transferability

Tenure transferable with Minister's approval [{4} Sec 13]. Logs transferable between provinces.[2]

## Rights of Holder to Economic Benefits

### Costs

Stumpage {1}

| | |
|---|---|
| FML Average | $1.65/m$^3$ |

### Benefits

Timber and the "allowable cut effect" {6}.

### Stumpage system

Negotiated for each agreement and adjusted periodically in accordance with a selling price index {1}.

## Operational Requirements

### Reforestation

Tenure holders are responsible for reforestation and other silvicultural treatments. Government provides growing stock free of charge {6}.

### Protection

Government is responsible for all protection {1}.

### Road Building

Holder must construct roads at own expense {1}, but may receive government funds where public benefits exist from road construction {6}.

### Operation of Processing Plant

Investment in a wood processing plant must be sufficient to warrant a continuous timber supply [{4} Sec 19(1)].

### Harvesting Requirements

Utilization requirements and environmental considerations must be followed [{5} Sec 2-4]. Sustained Yield cutting controls are in place for each licence {6}.

### Other

Licensee is required to allocate wood to third parties {6}.

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[1] Only two such agreements, negotiated separately to Manfor and Abitibi-Price, exist {7}.

[2] Reg. 58 which restricted exports was repealed by M.R. 161/81.

**Duration**

20 years, renewable [{4} Sec 19(2)].

**Security**

Minister may withdraw lands from a forest management licence area if he thinks it necessary [{4} Sec. 16].[3] Minister is the sole judge of whether tenure conditions have been fulfilled [{4} Sec 22(2)].

**Use Restrictions**

Minister has the authority to lease provincial forest lands for other public uses [{5} Sec 66(1)]. Mining is permitted on forest land [{4} Sec 21(1)].

**Size Specifications**

Large tenures of 430 000 $m^3$/yr and 963 000 $m^3$/yr (respective supply needs of Abitibi-Price and Manfor) {7}. Area can be extended if mill requires more wood [{4} Sec 19(6)] and if more wood is available {6}.

**Allotment Type**

Area allotment {7}.

**Operational Control**

Government approval of operating (1 and 5 year) and management (20 year) plans {6}.

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[3] New agreements are expected to put limitations on withdrawals over a 10 or 100-year period {4}.

## IVb. Manitoba: Timber Sale Agreement (TSA)

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only [{7}, {4} Sec 19(4)].

### Transferability

Same as IVa.

### Rights of Holder to Economic Benefits

#### Costs

Average stumpage rate for TSA holders: $1.32/m$^3$ {1}.

Other charges: None, but they may be set at the discretion of the Minister {2}.

#### Benefits

Timber.

#### Stumpage system

Dues are set by regulation and periodically adjusted in accordance with two national forest product price indices {1}. TSAs are also subject to competitive bidding by sealed tender which may include a bonus bid {6}.

### Operational Requirements

#### Reforestation

Government is responsible for reforestation {1}.

#### Protection

Same as IVa.

#### Road Building

Holders must construct and maintain roads at their own expense {6}.

#### Operation of Processing Plant

Tenure holders are not required to operate a processing plant {6}.

#### Harvesting Requirements

Utilization requirements and environmental considerations must be followed [{5} Sec 2-4].

### Duration

1-15 years (usually 5 years {6}), replaceable (perhaps with a different volume) [{7}, {5} Sec 24(2)].

### Security

Same as IVa except that the tenure may be cancelled or reduced if the annual harvest rate is not maintained [{7}, {6}].

### Use Restrictions

Same as IVa.

**Size Specifications**

Small to medium agreements (300 to 100 000 $m^3/yr$) {5}.

**Allotment Type**

Volume allotments [{5} Sec 24(2)].

**Operational Control**

Government monitoring [{4} Sec 15(a)].

## IVc. Manitoba: Timber Permit

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only [{4} Sec 19(4)].

### Transferability

Timber permits are not transferable but timber or timber products may be exported {6}.

### Rights of Holder to Economic Benefits

#### Costs

Same as IVb except that average stumpage rate for TP holders is $0.93/m^3$ {1}.

#### Benefits

Timber.

#### Stumpage system

Dues are set by regulation and periodically adjusted in accordance with two national forest product price indices {1}. Dues are payable upon purchase of permit for those products listed on the permit. Conditional refunds may be permitted {6}.

### Operational Requirements

#### Reforestation

Government is responsible for reforestation {1}.

#### Protection

Same as IVa.

#### Road Building

Same as IVb.

#### Operation of Processing Plant

Permit holders are not required to operate a processing plant {6}.

#### Harvesting Requirements

Same as IVb.

#### Other

Government may impose various special conditions [{5} Sec 37].

### Duration

1 year or less, non-renewable, non-replaceable [{5} Sec 33(1), 33(2)].

### Security

Same as IVa.

**Use Restrictions**

Same as IVa.

**Size Specifications**

Volumes may not exceed 300 $m^3$/annum where permit holders intend to sell wood products unless approved otherwise by the Director of Forestry. Volumes for personal uses may not exceed 100 $m^3$/household per annum.

**Allotment Type**

Volume allotments [{5} Sec 43(1), 43(2)].

**Operational Control**

Government supervision of cutting [{5} Sec 37].

# V. Ontario

**Sources**


{1} Canadian Forestry Service, 1986.

{2} Canadian Softwood Lumber Committee, 1983.

{3} Fullerton, 1984.

{4} Nautiyal, 1977.

{5} The Ontario Crown Timber Act, 1980.

{6} Ontario Forest Management Agreement, 1987.

{7} Ontario Ministry of Natural Resources, 1989.

{8} Ontario Ministry of Natural Resources, 1986a.

{9} Ontario Ministry of Natural Resources, 1986b.

{10} Rawat, 1985.

{11} Sterling Wood Group, Inc., 1985.

# Va. Ontario: Forest Management Agreement

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights[1] and management responsibilities [{5} Sec 12(1), 6(1)].

## Transferability

Tenure transferable with Minister's consent [{5} Sec 18]. All timber must be manufactured in Canada [{5} Sec 15(1)].

## Rights of Holder to Economic Benefits

Costs {7}

| Stumpage[2] | Integrated Licensee | Non-Integrated Licensee |
|---|---|---|
| Coniferous | 7.00/$m^3$ | \$3.29/$m^3$ |
| Deciduous | \$1.20 -5.75/$m^3$ | \$0.50 - 4.16/$m^3$ |
| Fuelwood Avg. | \$1.06 - 1.42/$m^3$ | \$1.10 - 1.25/$m^3$ |

Inventory {1}: estimated at 0.06/$m^3$

Benefits

Timber and the allowable cut effect. Allowable annual cut attributable to silviculture done at the holder's expense above prescribed levels is only charged one-tenth of normal rate [{5} Sec 6(1)(f), {6} Sec 19(a)].

Stumpage system

Crown dues are set by regulation and are adjusted quarterly with a selling price index. Additionally, bonus prices are negotiated with each licensee [{1}, {7}].

## Operational Requirements

Reforestation

The Minister supplies the company with seed or seedlings free of charge and pays the company, at rates specified in each agreement, to conduct silvicultural treatments set out for each agreement [{6} Sec 18].

Protection

Government is responsible for protection {1}.

Road Building

Government pays road building costs up to \$47 740/km for primary roads and \$12 731/km for secondary roads and pays \$471/km per annum to maintain roads[3] [{6} Sec 27]. The government contributions to road building do not cover the complete costs of the tenure holder {7}.

Operation of Processing Plant

Holders must own or operate a mill or have a contract to supply a mill [{5} Sec 2(4)]. Any construction, reconstruction, conversion or increase in capacity of a mill requires a licence and the Minister's approval [{5} Sec 47].

---

[1] Some agreements contain volumes which have been previously directed or declared surplus.

[2] Amounts exclude bonus bids and are for the period April to June, 1989.

[3] This provision is subject to the availability of funds {7}.

**Harvesting Requirements**

Wasteful practices in forest operations are prohibited [{5} Sec 29]. Harvesting must be carried out on a sustained yield basis [{5} Sec 6(1), 6(2)] and in accordance with timber plan {7}. Harvested volumes over a 5 year period must be within ± 10 percent of the approved planned harvest levels [{6} Sec 16(1)].

**Other**

The Ministry of Natural Resources is responsible to ensure public consultation opportunities during the preparation of timber management plans and permit public review of annual work schedules for all forest operations {9}.

**Duration**

20 years, 5 year "evergreen" {3}.

**Security**

Up to 5 percent of the maximum allowable depletion may be withdrawn without compensation {3}.

**Use Restrictions**

Minister may withdraw land for other uses in the public interest [{6} Sec 31-32].

**Size Specifications**

Size is at Minister's discretion [{5} Sec 5(1)]. Minister may allow agreements to be sub-divided [{5} Sec 18, {11}].

**Allotment Type**

Area allotment {4}.

**Operational Control**

Government approval of plans and reports including annual work schedules and cuts. [{5} Sec 6(1)(g), {7}].

## Vb. Ontario: Order-in-Council Licence

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights [{5} Sec 3, 12(1)] and some management responsibilities {11}.

### Transferability

Tenure transferable with Minister's consent, who may impose such terms and conditions as he considers proper [{5} Sec 18]. All timber must be manufactured in Canada [{5} Sec 15(1)].

### Rights of Holder to Economic Benefits

Costs {7}

Same as Va.

Benefits

Timber.

Stumpage system

Same as Va.

### Operational Requirements

Reforestation

Crown is generally responsible for reforestation {11}. Holder may perform certain reimbursed silvicultural activities [{10}, {5} Sec 27(4)] and receives free seedlings if reforestation is conducted {7}.

Protection

Same as Va.

Road Building

Road construction and maintenance costs are paid for by the licensee. In a few instances, smaller licensees may gain access by Crown constructed or funded roads {7}.

Operation of Processing Plant

Same as Va.

Harvesting Requirements

Wasteful practices in forest operations are prohibited [{5} Sec 29, Reg 234 Sec 26]. Licences are issued consistent with government approved management and operating plans which control the location, volume of timber and area to be harvested [{5} Sec 14].

Other

Same as Va.

### Duration

Variable (5-20 years) depending on size of mill (longer for larger mills) {11}. Smaller areas are licensed for 1 to 5 years. Licences are renewable for 1 year [{5} Sec 3(2)].

**Security**

Minister may change the licence with respect to size of licenced area, or type, size or species of timber [{5} Sec 28(1)] or dispose of public lands notwithstanding any licence [{5} Sec 20(b)]. Minister may cancel licence if performance is inadequate [{5} Sec 18(3)].

**Use Restrictions**

Minister may withdraw land for other uses [{5} Sec 20(b)].

**Size Specifications**

Sizes are variable at the Minister's discretion {11}. Minister may allow licences to be subdivided [{5} Sec 18].

**Allotment Type**

Area allotments {10}.

**Operational Control**

Government approval and amendments of operating and management plans [{5} Sec 26-28, {11}].

## Vc. Ontario: Miscellaneous Licences[1]

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only [{5} Sec 2].

### Transferability

Same as Va except for those licences issued under Sec 2(7) are not transferable {8}.

### Rights of Holder to Economic Benefits

Costs

Variable as the Minister considers proper [{5} Sec 2(2) and Sec 2(7)].

Stumpage (minima) {7}:

| | |
|---|---|
| Coniferous | $3.62/m$^3$ |
| Deciduous | $0.50 - 3.95/m$^3$ |
| Fuelwood | $1.13/m$^3$ |

Inventory {1}: estimated at 0.06/$m^3$

Benefits

Timber.

Stumpage system

Variable procedures including dues, bonus bids, negotiations, and competitive bidding {1}.

### Operational Requirements

Reforestation

Government is responsible for reforestation {1}

Protection

Same as Va.

Road Building

Areas are usually accessed with existing or government funded roads. Commercial licensees construct any additional required access {7}.

Operation of Processing Plant

Commercial licensees must own or operate a mill or have a contract to supply a mill [{5} Sec 2(4, 7)]. Licences for personal uses do not require their holders to operate a mill {7}.

Harvesting Requirements

Harvesting in accordance with timber management plans which control the location, volume of timber and area to be harvested {7}. Utilization requirements are set by the Minister [{5} Sec 28(2), Reg 234 Sec 26]

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[1] Includes licences issued subsequent to tendered sales of timber [{5} Sec 2(2)], and small licences to harvest timber for commercial use, and licences to cut timber for personal use (i.e. fuelwood) [{5} Sec 2(7)].

**Duration**

Licences issued under Sec 2(7) are for 1 year maximum and are not renewable. Licences issued under Sec 2(2) are usually for either 1, 2, or 3 years and are renewable for one term not exceeding 3 years [{5} Sec 2(6), {7}].

**Security**

Minister may dispose of public lands notwithstanding any licence [{5} Sec 20(b)].

**Use Restrictions**

Same as Vb.

**Size Specifications**

Licences are usually for small areas and if issued under Sec 2(7) are limited to 65 hectares {7}.

**Allotment Type**

Area allotments {10}.

**Operational Control**

Government monitoring and supervision as the Minister deems necessary [{5} Sec 2(2) and 2(7)].

## Vd. Ontario: Licence to Salvage Crown Timber

This licence is issued under Sec. 5 {5} for periods of usually 1 year {7}. Stumpage is at a reduced rate which has been negotiated with the licensee to encourage utilization of salvageable wood. All other characteristics are similar to those of miscellaneous licences except that some salvage licences may have management planning requirements {7}.

## VI. Quebec

**Sources**

{1} Canadian Forestry Service, 1986.

{2} Canadian Pulp and Paper Association, 1988.

{3} The Quebec Forests Act, 1986.

{3a} Bill 84[1]

{4} The Quebec Lands and Forests Act, 1964.

{5} Ministère de l'Énergie et des Ressources, Québec 1989.

[1] Bill 84 became law in December, 1988

# VIa. Quebec: CAAF Agreements[1]

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights of designated species or group of species [{3a} Sec 66] and management responsibilities [{3} Sec 42, Sec 51].

## Transferability

Tenures are not transferable, however, rights may be used as collateral [{3} Sec 39]. Timber must be processed in Quebec [{3} Sec 159] unless the government determines otherwise [{3} Sec 161].

## Rights of Holder to Economic Benefits

Costs {5}

| | |
|---|---|
| Stumpage | |
| Coniferous | $0.65 - 18.55/m$^3$ |
| Deciduous | $0.55 - 26.70/m$^3$ |
| Other | |
| Protection | |
| Fire | $0.29 - 0.58/m3 |
| Insect/Disease: | variable depending on spraying programs |

Benefits

Timber and "allowable cut effect" [{3} Sec 62].

Stumpage system

Stumpage rates vary by species, and quality of wood in 28 tariff zones [{5}, {3} Sec 5, 72]. A parity technique is used whereby timber is priced according to similar timber for which the price is known {1}.

## Operational Requirements

Reforestation

Tenure holders are responsible for all silvicultural treatments necessary to attain the annual yield indicated in the agreement [{3a} Sec 60]. The government supplies seedlings [{3} Sec 64] and reforests poorly stocked backlog areas [{3} Sec 65]. Silvicultural treatments necessary to achieve specified yield levels may be used to pay stumpage [{3a} Sec 89].

Protection

Tenure holders are required to be members of forest protection organizations and pay prescribed dues [{3a} Sec 127]. The protection organizations are reimbursed by the government, in whole or in part, for protection expenses at rates specified by regulation [{3} Sec 128]. The government reimburses tenure holders for costs of insect and disease protection at rates set by regulation [{3} Sec 146].

Road Building

Tenure holders construct roads and are reimbursed 50-80 percent of their costs for primary roads {5}.

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[1] CAAF - Contrat d'approvisionnement et d'aménagement forestier.

### Operation of Processing Plant

Holders must construct or operate a processing plant [{3} Sec 37]. The processing plant cannot be constructed or increase its capacity without government approval [{3} Sec 162].

### Harvesting Requirements

Utilization and environmental guidelines must be followed [{3} Sec 171]. The Minister determines annual volumes allocated to the tenure holder which may not exceed the AAC of the management unit [{3} Sec 43, 44].

### Duration

25 year term, 5 years "evergreen" [{3} Sec 74, 75].

### Security

All timber tenures entered into under the Lands and Forest Act [{4} Sec 213-216] were cancelled in April 1987 [{3} Title VIII Chapter I].

1. Tenure holders are entitled to compensation or a new CAAF [{3} Title VIII Chapter I and II].
2. In the case of CAAF, the new management area may be modified every 5 years [{3} Sec 50]. Minister may also terminate agreements for non-compliance of requirements [{3} Sec 82], in which case no compensation will be made.

### Use Restrictions

Areas allocated for timber production may be deleted from a forest management unit for reasons of public interest. The tenure holder will be compensated if forest management activities have been carried out which were approved by the government [{3} Sec 50].

### Size Specifications

Tenures rang in size from 2000 to 9 000 000 $m^3$. The 100 largest firms hold approximately 95 percent of the forest volume {5}.

### Allotment Type

Area allotment [{3} Sec 47]. A forest area or part thereof may be under several agreements which allocate timber of different species to different agreement holders [{3} Sec 48].

### Operational Control

Minister must approve general, 5 year, and annual management plans [{3} Sec 51, 52, 58].

## VIb. Quebec: Miscellaneous Permits

### Comprehensiveness and Exclusiveness

Variable forest product rights [{3} Chapter IV, Sec 11-23].

### Transferability

Permits are not transferable {5}. Timber must be processed in Quebec [{3} Sec 159] unless the government determines otherwise [{3} Sec 161].

### Rights of Holder to Economic Benefits

Costs {5}

Stumpage:

| | |
|---|---|
| Fuelwood | $1.00/m$^3$ |
| Maple products | $2.50/ha |

Various other products as per regulation.

Benefits

Timber and other forest products.

Stumpage system

Set by regulation {5}.

### Operational Requirements

Reforestation

Permits for fuelwood and maple products do not impose reforestation requirements on the tenure holder {5}. For other types of permits the Minister may specify regeneration requirements [{3a} Sec 11-24.3].

Protection

The government contributes 50 percent of protection costs {5}.

Road Building

Conditions are variable as specified by the government [{3} sec 171].

Operation of Processing Plant

Permits for fuelwood, maple products, and some other types of permits do not require the operation of a processing facility. However, permits issued under Sec 24.1 {3a} require the holder to operate a processing plant {5}.

Harvesting Requirements

Conditions are variable as specified by the government [{3} sec 171].

### Duration

Up to 12 months [{3} Sec 4].

**Security**

All timber tenures entered into under the Lands and Forests Act {4} were cancelled in April 1987 [{3} Title VIII Chapter I]. Tenure holders are not entitled to any compensation [{3} Sec 228].

The new permits delivered under the new Forests Act are valid for a period of one year. No cancellation is foreseen and therefore no compensation will be necessary.

The permit for sugar bush operations may not be reissued for reasons of public utility [{3} Sec 17.1]. There is no provision for compensation.

**Use Restrictions**

Areas allocated for timber production may be deleted from a forest management unit for reasons of public interest {5}.

**Size Specifications**

No restrictions are placed on size, however volumes committed under this tenure form are negligible {5}.

**Allotment Type**

Volume and area allotments [{3} Div 1].

**Operational Control**

Government supervision and auditing {5}.

# VII. New Brunswick

**Sources**


{1} Canadian Forestry Service, 1986.

{2} Canadian Softwood Lumber Committee, 1983.

{3} The New Brunswick Crown Lands and Forests Act, 1980.

{4} The New Brunswick Dept. of Natural Resources, 1986.

{5} The New Brunswick Dept. of Natural Resources, 1989.

{6} The New Brunswick Forest Regulations, 1986.

{7} Sterling Wood Group, Inc., 1985.

{8} Watson, 1984.

# VIIa. New Brunswick: Crown Timber Licence

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights, recognizing allocations to sub-licences (see Other) and management responsibilities [{3} Sec 30(1), 33(2), 38(1), 38(2)].

## Transferability

Licence transferable with Minister's consent [{3} Sec 34(1)(b)]. All timber from Crown lands must be manufactured within the Province unless given special permission by the Minister [{3} Sec 68(1)].

## Rights of Holder to Economic Benefits

### Costs

Stumpage {5}

| | |
|---|---|
| Coniferous sawlogs | $6.93/m$^3$ |
| Coniferous pulpwood | $6.20/m$^3$ |
| Deciduous sawlogs | $6.90/m$^3$ |
| Deciduous pulpwood | $3.71/m$^3$ |

### Benefits

Timber.[1]

### Stumpage system

Stumpage dues are set by regulation based on a survey of rates on private lands. Rates are set at 70 percent of private prices because of the relative inaccessibility of Crown timber and additional costs borne by tenure holders [{1}, {5}].

## Operational Requirements

### Reforestation

Holder is reimbursed, at rates established by the Crown, for approved reforestation expenditures [{3} Sec 38(2)]. Holder must carry out designated amount of silviculture to maintain long term productivity at specific levels {4}.

### Protection

Holder is responsible for fire protection on operations only. The province is responsible for overall fire protection and all insect and disease protection {5}.

### Road Building

Holder must pay for road costs [{2}, {3} Sec 81(1)]. Environmental standards for forest roads are prescribed by the government [{3} Sec 95(u)].

### Operation of Processing Plant

Holder must operate a processing plant [{3} Sec 28(a)].

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[1] Calculations of AACs are based on the maximum possible productivity of the forest land base. Thus the allowable cut effect does not play an important role {5}.

**Harvesting Requirements**

Holder is responsible for managing and utilizing timber to prescribed government standards {7}. Harvesting must be within ± 10 percent of the annual allowable cut yearly and ± 5 percent over 5 years {8}.

**Other**

Minister directs licensee to make available specified volumes to other sub-licensees on the licence area (see VIIb) [{3} Sec 41(4)(a)].

**Duration**

25 years, 5 years "evergreen" [{3} Sec 30(1), Sec 31(b)(i)].

**Security**

In 1982, all licences under the Crown Lands Act were cancelled [{3} Sec 22(1)] and the Minister offered new "appropriate" tenures [{3} Sec 22(2)]. The new term could be different [{3} Sec 27(6)(a & b)]. The Minister may cancel a licence or penalize a licensee for non-compliance with conditions [{3} Sec 36]. The Minister may withdraw portions of licences for other public uses [{3} Sec 35(g)]. Withdrawals of volumes are limited to 0.5 percent annually or 5 percent over 25 years {5}.

**Use Restrictions**

The Minister may withdraw portions of licences for other public uses [{3} Sec 35(g)].

**Size Specifications**

Average size is 503 000 $m^3$ ranging from 120 000 - 839 000 $m^3$ {4}.

**Allotment Type**

Area allotments {4}.

**Operational Control**

Holder must provide annual reports [{3} Sec 39] and management and operating plans [{3} Sec 40(1)] which are subject to government approval [{3} Sec. 29(1), 29(7)].

## VIIb. New Brunswick: Sub-Licence

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only to a volume within a major Crown Timber Licensee's area [{3} Sec 41(3)(c)].

### Transferability

Same as VIIa.

### Rights of Holder to Economic Benefits

#### Costs

Stumpage: Same as VIIa except that other fees may be negotiated with the major licence holder {8}.

#### Benefits

Same as VIIa.

#### Stumpage system

Same as VIIa.

### Operational Requirements

#### Reforestation

None. Major licence holder is responsible as in VIIa {8}.

#### Protection

Sub-licensee is responsible for fire protection on harvesting operations. Otherwise, Major licence holder and the province are responsible as in VIIa [{8}, {5}].

#### Road Building

Sub-licensee may build harvest roads. Otherwise Major licence holder is responsible as in VIIa {8}.

#### Operation of Processing Plant

Holders must operate a wood processing facility [{3} Sec 41(1)(a)].

#### Harvesting Requirements

Utilization requirements and environmental guidelines outlined in plans must be followed {7}.

### Duration

5 years, 1 year "evergreen" [{3} Sec 41(3)b, 41(4)(b)].

### Security

Same as VIIa.

### Use Restrictions

The Minister may withdraw lands for other uses from the major licensee's tenure area, but this is not likely to affect sub-licensees {5}.

**Size Specifications**

Volumes range from 400 to 400 000 $m^3$/ha per year {4}.

**Allotment Type**

Volume allotments [{3} Sec 47, {4}].

**Operational Control**

Sub-licensees shall cooperate with licensee in preparation and revision of management and operating plans [{3} Sec 41(6)] and in reports of harvested volumes [{3} Sec 44].

## VIIc. New Brunswick: Crown Timber Permit

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only to a volume within a major Crown Timber Licensee's area.[{3} Sec 32(c), {5}].

### Transferability

Tenures are not transferable {5}. All timber from Crown lands must be manufactured within the Province unless given special permission by the Minister [{3} Sec 68(1)].

### Rights of Holder to Economic Benefits

#### Costs

Stumpage rates used as an upset price {5}

| | |
|---|---|
| Coniferous sawlogs | $\$9.90/m^3$ |
| Coniferous pulpwood | $\$8.86/m^3$ |
| Deciduous sawlogs | $\$9.86/m^3$ |
| Deciduous pulpwood | $\$5.30/m^3$ |

Additionally, some permit holders are charged $\$0.65/m^3$ scaling fee and/or a road user fee of $\$1.00/m^3$.

#### Benefits

Timber.

#### Stumpage system

Stumpage dues are established through bidding which uses an upset price that is set by regulation based on a survey of rates on private lands {5}.

### Operational Requirements

#### Reforestation

Major licence holder is responsible for reforestation as in VIIa {5}.

#### Protection

Major licence holder and the province are responsible for protection as in VIIa {5}.

#### Road Building

In most cases, the major licence holder is responsible for road building as in VIIa {5}.

#### Operation of Processing Plant

Holders are not required to operate a processing plant {5}.

#### Harvesting Requirements

Holder must harvest according to government specified conditions {5}.

### Duration

Up to 1 year {5}.

**Security**

Any insecurity of the major licensee is not likely to affect volumes for the permit holder {5}.

**Use Restrictions**

The Minister may withdraw lands for other uses from the major licensee's tenure area, but this is not likely to affect permit holders {5}.

**Size Specifications**

Small allotments used primarily for fuelwood {2}.

**Allotment Type**

Volume allotments {7}.

**Operational Control**

Government Supervision and approval of harvesting plans [{3} Sec 53(1)].

# VIII. Nova Scotia

**Sources**

{1} Canadian Forestry Service, 1986.

{2} Canadian Softwood Lumber Committee, 1983.

{3} Nova Scotia Department of Lands and Forests, 1986.

{4} Nova Scotia Department of Lands and Forests, 1989.

{5} The Nova Scotia Forests Act, 1986.

{5a} Bill 78[1]

{6} Rawat, 1985.

{7} Sterling Wood Group, Inc., 1985.

[1] The bill has gone through its final reading and is now law.

# VIIIa. Nova Scotia: Licence and Management Agreement (LMA)[1]

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights and management responsibilities {1}.

## Transferability

Tenures transferable with Ministers consent. Timber or timber products may not be exported without government approval {4}.

## Rights of Holder to Economic Benefits

### Costs

Stumpage {1}

LMA Average 1.39/$m^3$

### Benefits

Timber plus harvest volumes may be increased if silvicultural investments show increases in future productivity {4}.

### Stumpage system

Pulpwood dues are negotiated and adjusted every 10 years using price indices. Other product dues are negotiated each year {1}.

## Operational Requirements

### Reforestation

Holder is responsible for reforestation [{7}, {2}] but receives a stumpage rebate for silviculture work (up to $1.75 per cord of pulpwood and up to 65 percent on other products)[{4}, {3}].

### Protection

Crown is responsible for fire protection [{5} Sec 21(1)]. Costs of insect and disease protection are shared by the Crown and the licensee {1}.

### Road Building

Holder is responsible for road building [{7}, {1}].

### Operation of Processing Plant

Holder must operate a timber processing plant {7}.

### Harvesting Requirements

Utilization and environmental considerations must be followed {7}. Sustained yield cut controls must be followed {4}.

### Other

Crown shall manage for wildlife habitat and for the maintenance of long term productivity, diversity and stability of the forest ecosystem [{5a} Sec 25].

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[1] Two similar agreements exist.

**Duration**

50 years, one is 10 year "evergreen", the other renewable for another 40 years [{6}, {3}, {7}].

**Security**

Minister may exchange Crown lands [{5a} Sec 7].

**Use Restrictions**

The government may withdraw lands for non-forest uses {4}.

**Size Specifications**

Two large agreements (85 000 ha and 607 500 ha) to pulp and paper companies [{2}, {3}, {4}].

**Allotment Type**

Area allotment {7}.

**Operational Control**

Government approval of forest management and annual operating plans {4}.

## VIIIb. Nova Scotia: Utilization Licence Agreement (ULA)

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only [{5a} Sec 33(1), {6}].

### Transferability

Same as VIIa.

### Rights of Holder to Economic Benefits

Costs

Stumpage

ULA Average rate (sawlogs only) $7.43/m^3$

Benefits

Timber.

Stumpage system

Prices are set with formulae which take a fixed percentage of prices of value-added wood products from the Maritime Lumber Bureau Sales Report. Upcoming years will adopt Statistics Canada Industrial Product Prices {4}.

### Operational Requirements

Reforestation

Government is responsible for reforestation {7}.

Protection

Government is responsible for protection {7}.

Road Building

Holder is responsible for road building [{7}, {6}]. However, an access road program, administered by the Forest Products Association, helps holders in funding road construction with a gas tax rebate {4}.

Operation of Processing Plant

Holder must own or operate a processing facility or enter an agreement to construct such a facility [{5a} Sec 32(1)].

Harvesting Requirements

Utilization requirements and environmental protection guidelines must be followed in harvesting {4}.

### Duration

Maximum of 10 years [{5a} Sec 32(3)], renewable for one period [{5a} Sec 32(4)].

### Security

Same as VIIIa.

**Use Restrictions**

Same as VIIIa.

**Size Specifications**

Tenures are smaller than VIIIa and held by sawmill operators [{2}, {3}].

**Allotment Type**

Volume allotment [{6}, {3}].

**Operational Control**

Government approval of 5 year and annual operating plans [{6}, {4}].

# VIIIc. Nova Scotia: Timber Licence (TL)

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights or rights to buy timber cut by the Province {6}.

## Transferability

Same as VIIIa.

## Rights of Holder to Economic Benefits

### Costs

Stumpage {1}
TL Average 5.87/$m^3$

### Benefits

Timber.

### Stumpage system

Competitive bidding with an upset price set by the government {4}.

## Operational Requirements

### Reforestation

Same as VIIIb.

### Protection

Same as VIIIb.

### Road Building

Same as VIIIb.

### Operation of Processing Plant

Tenure holders are not required to operate a processing plant {4}.

### Harvesting Requirements

Utilization requirements and environmental guidelines must be followed in harvesting {4}.

## Duration

2 years, renewable for one year at a time [{7}, {5a} Sec 31(3)].

## Security

Same as VIIIa.

## Use Restrictions

Same as VIIIa.

## Size Specifications

Small allotments (smaller than VIIIb) {4}.

**Allotment Type**

Volume allotments {6}.

**Operational Control**

Government monitoring and supervision {3}.

## VIIId. Nova Scotia: Letters of Authority

Letters of authority may be granted to allow individuals small allotments of wood for personal use only. Tenure holders are charged $10/cord or $50/mfbm.

# IX. Prince Edward Island

**Sources**


{1} Canadian Forestry Service, 1986.

{2} Prince Edward Island Coordinating Committee for Conservation, 1987.

{3} Prince Edward Island Department of Energy and Forestry, 1987.

{4} Prince Edward Island Department of Energy and Forestry, 1989.

{5} Prince Edward Island Environmental Protection Act, 1988.

{6} Prince Edward Island Fire Prevention Act, 1983.

{7} The Prince Edward Island Forest Management Act, 1988.

{8} Rawat, 1985.

{9} Sterling Wood Group, Inc., 1985.

# IXa. Prince Edward Island: Forest Products Sales Permit

## Comprehensiveness and Exclusiveness

Exclusive rights to harvest timber or other forest products. [{7} Sec 11(2)].

## Transferability

Tenures are transferable if specified in the permit. Exports of timber or timber products are not restricted {4}.

## Rights of Holder to Economic Benefits

### Costs

Stumpage {4}

| | |
|---|---|
| Pulpwood | |
| dry | $0.85 - 2.50/m$^3$ |
| green | $3.30 - 4.20/m$^3$[1] |
| Studwood | $3.30 - 6.70/m$^3$ |
| Logs | $5.80 and up |
| Hardwood | $3.30 - 8.00/m$^3$ |
| Chipwood | $1.00 per green ton. |

### Benefits

Timber and other forest products {4}.

### Stumpage system

Open tender bidding with an upset price being set by comparisons with wood of similar quality on private land {4}.

## Operational Requirements

### Reforestation

The Crown is responsible for reforestation {4}.

### Protection

The tenure holder is responsible for initial attack until the Department of Energy and Forestry personnel arrive to assume control of suppression activities [{6} Sec 28(2)]. Government is responsible for control of insects and diseases {4}.

### Road Building

Holder is normally responsible for road building, however conditions of the permits may vary {4}.

### Operation of Processing Plant

The holder is not required to operate a processing plant {4}.

### Harvesting Requirements

Holders must harvest according to utilization standards, and environmental restrictions [{7}, {8}, {2}, {3}, {5}].

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[1] In one instance the charge is $8.75/m$^3$.

**Duration**

Normally, up to one year, but this can be modified in the permit. The permit may specify renewability {4}.

**Security**

A forest officer may order a permit holder to cease and desist harvesting if, in his opinion, the permit holder is in violation of a permit. The permit holder has no claim to compensation for cease and desist orders [{7} Sec 11(6-7)].

**Use Restrictions**

Government policy is to preserve the remaining forest land base and restore and improve its productivity [{1}, {9}, {4}].

**Size Specifications**

Tenures are generally for small sawmills and personal uses {9}. District Managers must ensure that the cut size is consistent with the conservation policy {4}.

**Allotment Type**

Tenders may be for a specified area of land or for volume allotments {4}.

**Operational Control**

Government auditing and supervision [{7} Sec 11(6), {4}].

## IXb. Prince Edward Island: Forest Leases

A small portion of the forest land base is leased to community organizations (eg. Boy Scouts) but not to private sector forest companies. These leases are generally for a maximum duration of 10 years and allow forests to be managed for multiple uses including the protection of forested natural areas [{4}, {7} Sec 10(3,4)].

# X. Newfoundland

**Sources**


{1} Canadian Forestry Service, 1986.

{2} Canadian Pulp and Paper Association, 1988.

{3} The Newfoundland Crown Lands Act, 1970

{4} Newfoundland Department of Forestry, 1989.

{5} Rawat, 1985.

{6} Sterling Wood Group, Inc., 1985.

# Xa. Newfoundland: Leased and Licenced Lands

## Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights and management responsibilities. Leases also include exclusive mineral rights {6}.

## Transferability

Tenures are transferable subject to the approval of the Lieutenant Governor-in-Council. Export of logs or lumber from the Province is only allowed with government consent {4}.

## Rights of Holder to Economic Benefits

### Costs

Stumpage: none {6}.

Other charges {2}

| | |
|---|---|
| Protection | $0.352/ha |
| Ground rent | $0.77/km$^2$ |

### Benefits

Timber.

### Stumpage system

None.

## Operational Requirements

### Reforestation

Holder is responsible for reforestation, but yearly negotiations regarding cost sharing are held with the Province {6}.

### Protection

Holder pays one third of insect protection costs {6}. Protection beyond initial fire fighting expenditures are borne by the province {1}. If a fire is started due to the holder's negligence, then the holder bears the suppression costs for the first 72 hours {4}.

### Road Building

Holder pays all costs for road building {4}.

### Operation of Processing Plant

Holders were originally required to operate a wood processing facility, but this provision was dropped in the newest Act {4}.

### Harvesting Requirements

Utilization and environmental considerations must be followed in harvesting {4}.

## Duration

99 years, leases are renewable, licences are not {6}.

**Security**

Lieutenant Governor-in-Council may exchange lands for public uses by mutual consent between industry and government. Government may take standing licenced timber without compensation for various specified purposes {4}.

**Use Restrictions**

Lieutenant Governor-in-Council may exchange lands for public uses by mutual consent between industry and government.

**Size Specifications**

Tenures are held by large pulp and paper companies {5}.

**Allotment Type**

Area allotment {5}.

**Operational Control**

Holders are required to submit management (10 years) and operating (5 years) plans for Ministry approval. Upon approval, the Ministry issues a Certificate of Managed Land to the tenure holder that entitles him to a lower taxation rate. The Certificate may be revoked if actual management does not follow the approved plans {4}.

## Xb. Newfoundland: Short Term Timber Licence[1]

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights [{3} Sec 70].

### Transferability

Tenure is not transferable. Export of logs or lumber from the Province is only allowed with government consent {4}.

### Rights of Holder to Economic Benefits

Costs {2}

| | Non-government access roads | Government access roads |
|---|---|---|
| Stumpage charges | | |
| Pulpwood | $1.15/m$^3$ | $2.35/m$^3$ |
| Sawlogs | $5.50/mfbm | $7.70/mfbm |

Benefits

Timber.

Stumpage system

Rates are administratively set and reviewed annually considering the implicit price index of government goods and services and the selling price index of lumber or newsprint east of the Rockies {1}.

### Operational Requirements

Reforestation

The holder has full responsibility for reforestation. Up to two thirds of stumpage payable in any one year may be invested in silviculture other than regeneration {4}.

Protection

Same as Xa except all fire protection costs are paid by the Crown {1}.

Road Building

Tenure holder pays all costs for road building. If government access roads are used, the tenure holder pays higher stumpage {4}.

Operation of Processing Plant

The implicit purpose of this licence is to supply a pulp mill {4}.

### Harvesting Requirements

Utilization and environmental considerations must be followed in harvesting [{3} Sec 76(a)].

### Duration

20 years, renewable subject to performance {4}.

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[1] Only one short term licence has ever been issued.

**Security**

Lieutenant Governor-in-Council may exchange lands for public uses [{3} Sec 74]. Government may take standing licenced timber without compensation [{3} Sec 76(f)] or for the preservation and conservation of timber [{3} Sec 98(d)].

**Use Restrictions**

Lieutenant Governor-in-Council may exchange lands for public uses [{3} Sec 74]. Government may take standing licenced timber without compensation [{3} Sec 76(f)] or for the preservation and conservation of timber [{3} Sec 98(d)].

**Size Specifications**

Held by a pulp mill with an AAC of 181 000 $m^3$ {4}.

**Allotment Type**

Area allotments {6}.

**Operational Control**

Same as Xa {4}.

## Xc. Newfoundland: Cutting Permit

### Comprehensiveness and Exclusiveness

Exclusive timber harvesting rights only {6}.

### Transferability

Same as Xb.

### Rights of Holder to Economic Benefits

Costs

Same as Xb.

Benefits

Timber.

Stumpage system

Same as Xb.

### Operational Requirements

Reforestation

The Crown has full responsibility for reforestation {4}.

Protection

The Crown has full responsibility for protection {4}.

Road Building

The Crown pays all costs for road building {4}.

Operation of Processing Plant

Holders are not required to operate a processing plant {4}.

Harvesting Requirements

Same as Xb.

### Duration

Up to one year and renewable {4}.

### Security

Same as Xb.

### Use Restrictions

Same as Xb.

### Size Specifications

Tenures are for less than 10 000 $ft^3$ (283 $m^3$) of timber, however volumes may be greater with cabinet approval [{3} Sec 86, 87, {4}].

**Allotment Type**

Volume allotments {5}.

**Operational Control**

The holder may loose the permit if stipulations are not followed {4}.